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Letter of Transmittal

Attention: Ms. Terese Van Donsel
(USEPA) Date: June 10, 2020

Mr. Brian Conrath (IEPA)

Hamilton Sundstrand
Corporation Plants 1/2 Facility
Southeast Rockford
Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, Illinois 61104

Project reference: ILD981000417 Project number: 60627752

We are sending you the following:

Number of originals:	Number of copies:	Description:
1	1	2020 First Quarter GMZ Monitoring and System Performance Report

Enclosed please find the 2020 First Quarter Annual GMZ Monitoring and System Performance Report for Hamilton Sundstrand Corporation Plant 1/2 Facility, Southeast Rockford Groundwater Contamination Superfund Site, Rockford, Illinois.

Thank You.

Peter Hollatz, P.E.

cc: Mr. John Wolski, Raytheon Technologies Corporation
 Mr. Jon Alberg, AECOM
 Project File



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Prepared for:
Hamilton Sundstrand Corporation
Rockford, IL

Prepared by:
AECOM
Warrenville, IL
60627752
June 10, 2020

First Quarter 2020 GMZ Monitoring and System Performance Report

Hamilton Sundstrand Corporation Plant 1/2 Facility
Southeast Rockford Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, IL 61104
ILD 981000417



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June 10, 2020

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Remedial Project Manager
U.S. EPA Region 5 (SR-6J)
Superfund Division
77 West Jackson Blvd.
Chicago, Illinois 60604

Mr. Brian Conrath
National Priorities List Unit
Federal Sites Remediation Section
Division of Remediation Management
Bureau of Land
Illinois Environmental Protection Agency
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Subject: First Quarter 2020 GMZ Monitoring and System Performance Report
Hamilton Sundstrand Corporation Plant 1/2 Facility
Southeast Rockford Groundwater Contamination Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417
AECOM Project No. 60627752

Dear Ms. Donsel and Mr. Conrath:

This Quarterly Groundwater Management Zone (GMZ) Monitoring and System Performance Report has been prepared by AECOM Technical Services Inc. (AECOM) on behalf of Hamilton Sundstrand Corporation (HSC). In accordance with the approved March 2007 Operation, Maintenance, and Monitoring Plan (OM&M Plan) and the United States Environmental Protection Agency (EPA) letter dated April 15, 2011, providing approval for combining project reporting documents, this report contains a summary of the following: 1) GMZ groundwater monitoring data; 2) the Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system performance data; 3) the Phase 1 and Phase 2 AS/SVE system process air analytical data; 4) GMZ wells that contain contaminants of concern (COCs) above Preliminary Remediation Goals (PRGs); and 5) Quarterly Progress Report for Second Quarter 2020.

As approved in the April 15, 2011 letter from Timothy Drexler (EPA), interpretation of collected groundwater quality and system performance data will be included in the Annual GMZ Monitoring and System Performance Report submitted in March of the subsequent year. This quarterly report provides the current environmental data including: tables and figures summarizing the results of first quarter 2020 GMZ monitoring and AS/SVE system performance data, supporting field data sheets and laboratory analytical reports, and the Quarterly Progress Report covering the period from March 1, 2020 to May 31, 2020.

The objective of AS/SVE system operation is to treat leachate-impacted groundwater at the HSC Plant 1/2 (Facility) property. The implemented remedy was specifically targeted to address an area of the Facility where COCs were originally present in leachate/groundwater at concentrations that were two or more orders of magnitude greater than their PRGs. Though the treatment area was not fully defined when the 2002 Record of Decision (ROD) for Operable Unit 3 (OU3) was issued, the entire Facility was identified/defined in the ROD as a "source location" within the larger established "Source Area 9/10" (Area 9/10) based on data collected prior to the ROD¹. The ROD further required that the Facility remedy include the establishment of a GMZ for this "source location" (the Facility) whose volume was defined by the Facility property boundaries and a vertical limit of 45 feet below ground surface. Two Facility GMZs, GMZ 1 (Facility property north of railroad tracks) and GMZ 2 (Facility property south of railroad tracks), were approved by the Illinois EPA in 2008. Monitoring wells within the Facility GMZs are routinely sampled, and the groundwater analytical results are compared to OU3 PRGs to evaluate the effectiveness of the remedy. PRGs for OU3 are federal Maximum Contaminant Levels (MCLs).

During the first quarter 2020 reporting period, the following six GMZ well locations along the Facility boundary contained COCs at concentrations above PRGs:

GMZ Monitoring Well ID	COC Concentrations > PRG (Increase (+) or Decrease (-) from Previous Quarter)
GMZ01	PCE (+)
SMW04	PCE (-)
SMW08	PCE (+)
SMW19	TCE (-)
PMW01	PCE (+)
PMW02	PCE (-)

Trichloroethene (TCE), Tetrachloroethene (PCE)

The above-noted decreases/increases in concentrations represent a relative change in COC concentrations (above the PRG) between the two most recent quarters of data. Such changes should not be viewed as an indication of a trend without further statistical evaluation.

Although still exceeding the PRGs, the GMZ wells along the western Facility property line continue to demonstrate stable or decreasing trends or no trends with degradation to daughter products from parent COCs apparent at several wells. The development of Alternative Cleanup Levels (ACLs) along the western Facility property line will represent the maximum allowable concentration at the

¹ See EPA Superfund Record of Decision Southeast Rockford Ground Water Contamination, 2002. EPA/ROD/R05-02/077 2002.

Facility boundary that will not result in a COC exceedance of a PRG at the Area 9/10 boundary downgradient of the Facility.

Achieving ACLs at the downgradient western Facility property line will demonstrate that the Facility is protective of human and environmental receptors at the downgradient Area 9/10 boundary. The downgradient Area 9/10 boundary is located at Harrison Avenue to the south and 6th Street to the west.

A Work Plan for the development of ACLs has been prepared by AECOM on behalf of HSC. The Work Plan was prepared as agreed following the meeting between HSC, AECOM, EPA and the Illinois EPA at the HSC Facility on May 8, 2017. The Work Plan was submitted to EPA and Illinois EPA on August 11, 2017. A letter dated May 29, 2019 was submitted to EPA and Illinois EPA requesting a review and approval of the Work Plan. Comments on the Work Plan provided by EPA and Illinois EPA were provided in a letter dated September 9, 2019. A response to the EPA September 9, 2019 comment letter was submitted on March 13, 2020.

The formulation of ACLs is consistent with the attainment of the OU3 ROD Remedial Action Objective (RAO) for groundwater specified in the ROD² and the objectives analysis/Remedial Action Process Flow Diagram (RAPFD) developed and approved for use by the EPA and Illinois EPA at the Facility. The RAPFD, which outlines the use of objective analysis in formulating ACLs that are proposed for the western Facility property line, is provided in the Statement of Work attached to the HSC Facility Consent Decree³ and included in subsequent approved Remedial Action Work Plan.

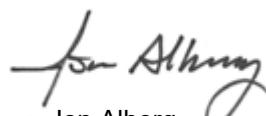
Please contact either of the undersigned with any questions you may have on the information provided.

Prepared by:



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Reviewed by:



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cc: Mr. John Wolski – Raytheon Technologies Corporation

² The OU3 ROD RAO for groundwater media is to: "Prevent the further migration of contamination from the source area that would result in degradation of site-wide groundwater or surface water to levels in excess of state or federal standards, or that pose a threat to human health or the environment."

³ See the Statement of Work in Appendix C of the Consent Decree between Hamilton Sundstrand Corporation and the United States Environmental Protection Agency (Civil Action Number 08 C 50129), Section II.D.2, *Implementation of Remedial Action and Attainment of Performance Standards* (pages 9 and 10).

Attachments:**Tables**

Table 1	Second Quarter 2019 to First Quarter 2020 Groundwater Elevations
Table 2	Second Quarter 2019 to First Quarter 2020 Groundwater Analytical Results - GMZ Wells
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Figure 5	Quarterly GMZ Groundwater Analytical Results Trends
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Figure 7	Average VOC Mass Removal Rate vs. Time Phase 1 AS/SVE System
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Appendices

Appendix A	First Quarter 2020 GMZ and Performance Monitoring Well Analytical Data
Appendix B	First Quarter 2020 Effluent Air Laboratory Analytical Reports
Appendix C	First Quarter 2020 Phase 1/Phase 2 AS/SVE System Operations Data Sheets
Appendix D	First Quarter 2020 Groundwater Sampling Data Sheets
Appendix E	Second Quarter 2020 Progress Report

Tables

Table 1
Second Quarter 2019 to First Quarter 2020 Groundwater Elevations
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Well ID	Top of Casing Elevation (ft)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft AMSL)						
		5/20/2019		8/5/2019		12/10/2019		2/11/2020	
MW07FGA	727.49	24.11	703.38	23.70	703.79	23.74	703.75	24.14	703.35
MW203	728.58	24.83	703.75	24.39	704.19	24.49	704.09	24.90	703.68
SMW01	729.71	26.88	702.83	26.67	703.04	26.70	703.01	27.11	702.60
SMW02	726.77	23.45	703.32	23.06	703.71	22.15	704.62	23.53	703.24
SMW04	728.51	26.15	702.36	25.89	702.62	25.96	702.55	26.41	702.10
SMW08	728.81	26.38	702.43	26.10	702.71	26.16	702.65	26.60	702.21
SMW19	728.49	25.04	703.45	24.68	703.81	24.74	703.75	25.12	703.37
SMW20	727.69	25.27	702.42	24.95	702.74	25.02	702.67	25.50	702.19
SMW21	727.25	24.76	702.49	24.47	702.78	24.51	702.74	24.99	702.26
GMZ01	731.41	28.89	702.52	28.67	702.74	28.73	702.68	29.15	702.26
GMZ02	728.76	26.47	702.29	26.21	702.55	26.29	702.47	26.79	701.97
GMZ03	728.22	25.87	702.35	25.60	702.62	25.67	702.55	26.14	702.08
GMZ04	726.84	24.11	702.73	23.80	703.04	23.85	702.99	24.31	702.53
BGW01	728.19	24.93	703.26	24.46	703.73	24.62	703.57	25.00	703.19
BGW02	728.81	25.34	703.47	24.90	703.91	25.02	703.79	25.41	703.40
BGW03	728.96	25.42	703.54	25.02	703.94	25.08	703.88	25.42	703.54
RAMW01	728.91	26.47	702.44	26.20	702.71	26.26	702.65	26.74	702.17
RAMW02	728.90	26.34	702.56	26.05	702.85	26.12	702.78	26.59	702.31
RAMW03	728.71	26.14	702.57	25.85	702.86	25.93	702.78	26.39	702.32
RAMW04	728.80	26.00	702.80	25.67	703.13	25.75	703.05	26.18	702.62
RAMW05	727.65	24.87	702.78	24.57	703.08	24.62	703.03	25.06	702.59
RAMW06	727.64	24.90	702.74	24.58	703.06	25.65	701.99	25.10	702.54
RAMW07	732.20	29.39	702.81	29.09	703.11	29.14	703.06	29.58	702.62
RAMW08	728.45	25.49	702.96	25.17	703.28	25.28	703.17	25.68	702.77
PMW01	728.88	26.56	702.32	26.29	702.59	26.37	702.51	26.87	702.01
PMW02	728.88	26.57	702.31	26.32	702.56	26.38	702.50	26.83	702.05
Ave. GW Elev. (ft AMSL)		702.80		703.12		703.05		702.61	

Notes:

NM = Not monitored

ft = feet

ft BTOC = feet below top of casing

ft AMSL = feet above mean sea level

All site well top of casing elevations re-surveyed on May 24, 2011.

RAMW04 riser was lowered due to ice damage that occurred during the 2013 winter. Well was resurveyed on July 1, 2013.

Table 2
Second Quarter 2019 to First Quarter 2020 Groundwater Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1,1- Trichloroethane	1,1,2- Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride
Preliminary Remediation Goals (PRG) ^A				0.005 _b ^a	0.005 _b ^a	0.007 _{b,c} ^a	0.7 ^a	0.005 _b ^a	0.07 _b ^a	0.1 _b ^a	0.2 _{b,c} ^a	0.005 _b ^a	0.7 _b ^a	0.005 _b ^a	1.0 _b ^a	0.002 _b ^a
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GMZ01	HS SER-GMZ01-052019	20-May-19		0.0011	0.0020 U	0.0010 U	0.0151	0.0010 U	0.116 ^A	0.0016	0.0011	0.0010 U	0.0010 U	0.0235 ^A	0.0010 U	0.0010 U
	HS SER-GMZ01-080619	6-Aug-19		0.0011	0.0020 U	0.0010 U	0.0090	0.0010 U	0.0013	0.0010 U	0.0023	0.0010 U	0.0010 U	0.0202 ^A	0.0010 U	0.0010 U
	HS SER-GMZ01-121019	10-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0099	0.0010 U	0.0088	0.0010 U	0.00062 J	0.0010 U	0.0010 U	0.0086 ^A	0.0010 U	0.0010 U
	HS SER-GMZ01-021220	12-Feb-20		0.0012	0.0020 U	0.0010 U	0.0092	0.0010 U	0.0021	0.0010 U	0.0024	0.0010 U	0.0010 U	0.0191 ^A	0.0010 U	0.0010 U
GMZ02	HS SER-GMZ02-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.00078 J	0.0010 U	0.0010 U	0.0010 U	0.00093 J	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U
	HS SER-GMZ02-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0012	0.0010 U	0.0010 U	0.0010 U	0.0014	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-GMZ02-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ02-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.00062 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
GMZ03	HS SER-GMZ03-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-082219	22-May-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.00065 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-080719	7-Aug-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-121219	12-Dec-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-021320	13-Feb-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
GMZ04	HS SER-GMZ04-052119	21-May-19		0.0010 U	0.0020 U	0.0010 U	0.0179	0.0010 U	0.0028	0.0010 U	0.0585	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-021220	12-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
MW07FGA	HS SER-MW07FGA-052019	20-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00075 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-MW07FGA-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-MW07FGA-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-MW07FGA-021220	12-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00074 J	0.0010 U	0.0010 U	0.00094 J	0.0010 U	0.0010 U
MW203	HS SER-MW203-052019	20-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0085 ^A	0.0010 U	0.0010 U
	HS SER-MW203-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0043	0.0010 U	0.0010 U
	HS SER-MW203-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0029	0.0010 U	0.0010 U
	HS SER-MW203-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0041	0.0010 U	0.0010 U
SMW01	HS SER-SMW01-052019	20-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	0.0030	0.0010 U	0.0010 U
	HS SER-SMW01-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0013	0.0010 U	0.0010 U

Table 2
Second Quarter 2019 to First Quarter 2020 Groundwater Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1,1- Trichloroethane	1,1,2- Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride
Preliminary Remediation Goals (PRG) ^A				0.005 ^a	0.005 ^a	0.007 ^{b,c}	0.7 ^a	0.005 ^a	0.07 ^a	0.1 ^a	0.2 ^{b,c}	0.005 ^a	0.7 ^a	0.005 ^a	1.0 ^a	0.002 ^a
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SMW08	HS SER-SMW08-052019	20-May-19		0.0023	0.0020 U	0.0010 U	0.0060	0.0010 U	0.0089	0.0010 U	0.0061	0.0010 U	0.0010 U	0.0569 ^a	0.0010 U	0.0010 U
	HS SER-SMW08-080619	6-Aug-19		0.0013	0.0020 U	0.0010 U	0.0106	0.0010 U	0.113 ^a	0.00170	0.0041	0.0010 U	0.0010 U	0.0346 ^a	0.0010 U	0.0010 U
	HS SER-SMW08-121019	10-Dec-19		0.0013	0.0020 U	0.00070 J	0.0087	0.0010 U	0.0707 ^a	0.00058 J	0.0034	0.0010 U	0.0010 U	0.0310 ^a	0.0010 U	0.0010 U
	HS SER-SMW08-021220	12-Feb-20		0.0015	0.0020 U	0.00066 J	0.0066	0.0010 U	0.0320	0.0010 U	0.0041	0.0010 U	0.0010 U	0.0390 ^a	0.0010 U	0.0010 U
SMW19	HS SER-SMW19-052119	21-May-19		0.0124 ^a	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U
	HS SER-SMW19-080619	6-Aug-19		0.0101 ^a	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00074 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW19-121219	12-Dec-19		0.0093 ^a	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-SMW19-021220	12-Feb-20		0.0085 ^a	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00067 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
SMW20	HS SER-SMW20-052119	21-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
SMW21	HS SER-SMW21-052119	21-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0024	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0019	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0018	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-021220	12-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0023	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
PMW01	HS SER-PMW01-052219	22-May-19		0.00054 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0018	0.0010 U	0.0010 U	0.0038	0.0010 U	0.0010 U
	HS SER-PMW01-080719	7-Aug-19		0.00068 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0022	0.0010 U	0.0010 U	0.0032	0.0010 U	0.0010 U
	HS SER-PMW01-121319	13-Dec-19		0.00074 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0020	0.0010 U	0.0010 U	0.0034	0.0010 U	0.0010 U
	HS SER-PMW01-021320	13-Feb-20		0.00068 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0018	0.0010 U	0.0010 U	0.0068 ^a	0.0010 U	0.0010 U
PMW02	HS SER-PMW02-052219	22-May-19		0.00070 J	0.0020 U	0.0010 U	0.0048	0.0010 U	0.0059	0.0010 U	0.0024	0.0010 U	0.0010 U	0.0095 ^a	0.0010 U	0.0010 U
	HS SER-PMW02-080719	7-Aug-19		0.00090 J	0.0020 U	0.0010 U	0.0048	0.0010 U	0.0056	0.0010 U	0.0022	0.0010 U	0.0010 U	0.0130 ^a	0.0010 U	0.0010 U
	HS SER-PMW02-121319	13-Dec-19		0.00072 J	0.0020 U	0.0010 U	0.0025	0.0010 U	0.0036	0.0010 U	0.0023	0.0010 U	0.0010 U	0.0134 ^a	0.0010 U	0.0010 U
	HS SER-PMW02-021320	13-Feb-20		0.00081 J	0.0020 U	0.0010 U	0.0038	0.0010 U	0.0064	0.0010 U	0.0015	0.0010 U	0.0010 U	0.0124 ^a	0.0010 U	0.0010 U

Notes:

PRG Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)

^{b,c} Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

^a Class 1 - Groundwater Remediation Objectives

Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

^c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

^{*} LCS or LCSD exceeds the control limits

B The analyte was detected in the method, field and/or trip blank.

H Sample was prepped or analyzed beyond the specified holding time

J Indicates estimated value.

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

Table 3
Second Quarter 2019 to First Quarter 2020 Groundwater Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride
Preliminary Remediation Goals (PRG) ^A				0.005 ^A _c	0.005 ^A _c	0.007 ^{b,c}	0.7 ^A	0.005 ^A _c	0.07 ^A _c	0.1 ^A _c	0.2 _{b,c}	0.005 ^A _c	0.7 ^A _c	0.005 ^A _c	1.0 ^A _c	0.002 ^A _c
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
RAMW01	HS SER-RAMW01-052219	22-May-19		0.00067 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	0.0040	0.0010 U	0.0010 U
	HS SER-RAMW01-080719	7-Aug-19		0.00086 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0038	0.0010 U	0.0010 U
	HS SER-RAMW01-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00061 J	0.0010 U	0.0010 U	0.0027	0.0010 U	0.0010 U
	HS SER-RAMW01-021420	14-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00056 J	0.0010 U	0.0010 U	0.0033	0.0010 U	0.0010 U
RAMW02	HS SER-RAMW02-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.00058 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0013	0.0010 U	0.0010 U
	HS SER-RAMW02-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW02-121219	12-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW02-021420	14-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
RAMW03	HS SER-RAMW03-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP02-052219	22-May-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00061 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW03-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00058 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP02-080719	7-Aug-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00060 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW03-121119	11-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00093 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-DUP02-121119	11-Dec-19	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00099 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-RAMW03-021420	14-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.00058 J	0.0010 U	0.0010 U	0.0010 U	0.00082 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-DUP02-021420	14-Feb-20	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0013	0.0010 U	0.0010 U
RAMW04	HS SER-RAMW04-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW04-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW04-121119	11-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.00074 J	0.0010 U	0.0010 U	0.0010 U	0.00083 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
	HS SER-RAMW04-021320	13-Feb-20		0.00053 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0016	0.0010 U	0.0010 U
RAMW05	HS SER-RAMW05-052219	22-May-19		0.0010 U	0.0020 U	0.0010 U	0.00060 J	0.0010 U	0.00095 J	0.0010 U	0.0183	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW05-080719	7-Aug-19		0.00089 J	0.0020 U	0.0010 U	0.0011	0.0010 U	0.0014	0.0010 U	0.0069	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW05-121119	11-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0045	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U
	HS SER-RAMW05-021320	13-Feb-20		0.00069 J	0.0020 U	0.0010 U	0.0012	0.0010 U	0.0012	0.0010 U	0.0018	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
RAMW06	HS SER-RAMW06-052219	21-May-19		0.0010 U	0.0020 U	0.0023	0.0032	0.0010 U	0.0053	0.0010 U	0.1850	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-080719	7-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0014	0.0010 U	0.0021	0.0010 U	0.0138	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-121119	11-Dec-19		0.0010 U	0.0020 U	0.00094 J	0.0034	0.0010 U	0.0030	0.0010 U	0.0795	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.0012	0.0010 U	0.0025	0.0010 U	0.0261	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
RAMW07	HS SER-RAMW07-052219	21-May-19		0.0020 U	0.0040 U	0.0244 ^A	0.0530	0.0020 U	0.0234	0.0020 U	2.57 ^A	0.0020 U	0.0286	0.0020 U	0.0020 U	0.0020 U
	HS SER-RAMW07-080619	6-Aug-19		0.0010 U	0.0020 U	0.0023	0.0119	0.0010 U	0.00068 J	0.0010 U	0.316 ^A	0.0010 U	0.0023	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW07-121119	11-Dec-19		0.0010 U	0.0020 U											

Table 3
Second Quarter 2019 to First Quarter 2020 Groundwater Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	
Preliminary Remediation Goals (PRG) ^a				0.005 ^a _c	0.005 ^a _c	0.007 ^a _{b,c}	0.7 ^a	0.005 ^a _c	0.07 ^a _c	0.1 ^a _c	0.2 ^a _{b,c}	0.005 ^a _c	0.7 ^a _c	0.005 ^a _c	1.0 ^a _c	0.002 ^a _c	
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
RAMW08	HS SER-RAMW08-052119	21-May-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	
	HS SER-RAMW08-080619	6-Aug-19		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW08-121119	11-Dec-19		0.0010 U	0.0020 U	0.0010 U	0.0042	0.0010 U	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0015	0.0010 U
	HS SER-RAMW08-021320	13-Feb-20		0.0010 U	0.0020 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U

Notes:

PRG Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)

^a Class 1 - Groundwater Remediation Objectives

6.5^a Concentration exceeds the indicated standard at specified well; however, compliance with the standard is only applicable to GMZ wells.

15.2 Concentration was detected but did not exceed applicable standards.

0.50 U Laboratory estimated quantitation limit exceeded standard.

0.03 U The analyte was not detected above the laboratory estimated quantitation limit.

mg/L milligrams per liter

n/v No standard/guideline value.

- Parameter not analyzed / not available.

^{b,c} Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

^c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

B The analyte was detected in the method, field and/or trip blank.

J Indicates estimated value.

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated

numerical value represents its approximate concentration.

Groundwater monitoring wells located within the influence of active treatment systems yield groundwater sample data that is potentially biased by the treatment activities. This potential bias should be considered during evaluation of this data.

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/10/2009		159	53	140	13000	3.76E-02	140 U	0.00E+00	45000	9.67E-02	140 U	0.00E+00	910	1.91E-03	18000	3.79E-02	140 U	0.00E+00	940	3.38E-03	260	7.41E-04	8100	1.10E-02	140 U	0.00E+00
12/22/2009		372	124	140	980	2.84E-03	26 U	0.00E+00	11000	2.36E-02	26 U	0.00E+00	130	2.74E-04	7300	1.54E-02	26 U	0.00E+00	390	1.40E-03	41	1.17E-04	470	6.38E-04	26 U	0.00E+00
2/24/2010		1893	631	150	640	1.99E-03	6.0 U	0.00E+00	1900	4.37E-03	6.0 U	0.00E+00	28	6.31E-05	630	1.42E-03	6.0 U	0.00E+00	150	5.78E-04	24	7.33E-05	33	4.80E-05	6.0 U	0.00E+00
3/15/2010		2345	782	140	1100	3.19E-03	8.4 U	0.00E+00	2800	6.01E-03	8.4 U	0.00E+00	37	7.79E-05	1300	2.74E-03	8.4 U	0.00E+00	180	6.48E-04	30	8.56E-05	32	4.34E-05	8.4 U	0.00E+00
4/14/2010		2804	935	150	1400	4.34E-03	12 U	0.00E+00	4100	9.44E-03	12 U	0.00E+00	31	6.99E-05	1400	3.16E-03	12 U	0.00E+00	790	3.05E-03	86	2.63E-04	91	1.32E-04	12 U	0.00E+00
5/13/2010		3495	1165	140	590	1.71E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	13	2.74E-05	1100	2.31E-03	7.0 U	0.00E+00	300	1.08E-03	32	9.13E-05	10	1.36E-05	7.0 U	0.00E+00
6/21/2010		4430	1477	108	710	1.59E-03	8.6 U	0.00E+00	2600	4.31E-03	8.6 U	0.00E+00	16 J	2.60E-05	570	9.25E-04	8.6 U	0.00E+00	290	8.05E-04	30	6.60E-05	8.6 U	0.00E+00	8.6 U	0.00E+00
7/21/2010		5058	1686	140	480	1.39E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	10	2.10E-05	630	1.33E-03	7.0 U	0.00E+00	710	2.56E-03	42	1.20E-04	7.0 U	0.00E+00	7.0 U	0.00E+00
8/23/2010		5784	1928	0	370	0.00E+00	8.2 U	0.00E+00	2400	0.00E+00	8.2 U	0.00E+00	540	0.00E+00	8.2 U	0.00E+00	500	0.00E+00	48	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00
9/23/2010		6523	2174	145	480	1.44E-03	7.2 U	0.00E+00	2000	4.45E-03	7.2 U	0.00E+00	72	0.00E+00	250	5.45E-04	7.2 U	0.00E+00	380	1.42E-03	31	9.16E-05	7.2 U	0.00E+00	7.2 U	0.00E+00
10/22/2010		7219	2406	140	390	1.13E-03	5.0 U	0.00E+00	1600	3.44E-03	5.0 U	0.00E+00	160	3.37E-04	5.0 U	0.00E+00	240	8.64E-04	21	5.99E-05	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00
10/22/2010	Dup	7219	2406	140	2600	7.53E-03	10 U	0.00E+00	960	2.06E-03	10 U	0.00E+00	120	2.53E-04	490	1.03E-03	10 U	0.00E+00	140	5.04E-04	49	1.40E-04	10 U	0.00E+00	10 U	0.00E+00
11/15/2010		7794	2598	140	420	1.22E-03	4.3 U	0.00E+00	1700	3.65E-03	4.3 U	0.00E+00	43	0.00E+00	140	2.95E-04	4.3 U	0.00E+00	140	5.04E-04	16	4.56E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
12/22/2010		8508	2777	150	600	1.86E-03	4.2 U	0.00E+00	1600	3.68E-03	4.2 U	0.00E+00	8.5	1.92E-05	510	1.15E-03	4.2 U	0.00E+00	75	2.89E-04	11	3.36E-05	4.2 U	0.00E+00	4.2 U	0.00E+00
1/24/2011		9302	2975	170	360	1.27E-03	5.2 U	0.00E+00	1700	4.43E-03	5.2 U	0.00E+00	52	0.00E+00	140	3.58E-04	5.2 U	0.00E+00	45	1.97E-04	8.6	2.98E-05	5.2 U	0.00E+00	5.2 U	0.00E+00
2/25/2011		10071	3167	165	280	9.56E-04	4.0 U	0.00E+00	1600	4.05E-03	4.0 U	0.00E+00	4.5	1.12E-05	120	2.98E-04	4.0 U	0.00E+00	34	1.44E-04	7.4	4.29E-05	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	200	6.83E-04	6.3 U	0.00E+00	1900	4.81E-03	6.3 U	0.00E+00	6.3	0.00E+00	130	3.22E-04	6.3 U	0.00E+00	32	1.36E-04	6.4	2.15E-05	6.3 U	0.00E+00	6.3 U	0.00E+00
4/15/2011		11241	3460	160	180 J,B	5.96E-04	4.5 U	0.00E+00	1700	4.17E-03	4.5 U	0.00E+00	4.5	0.00E+00	110	2.65E-04	4.5 U	0.00E+00	43	1.77E-04	8.6	2.80E-05	4.5 U	0.00E+00	4.5 U	0.00E+00
5/19/2011		12061	3665	160	110	3.64E-04	4.3 U	0.00E+00	1100	2.70E-03	4.3 U	0.00E+00	4.3	0.00E+00	85	2.04E-04	4.3 U	0.00E+00	55	2.26E-04	8	2.61E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
6/16/2011		12722	3830	170	150	5.27E-04	2.3 U	0.00E+00	730	1.90E-03	2.3 U	0.00E+00	2.8	7.15E-06	63	1.61E-04	2.3 U	0.00E+00	110	4.81E-04	12	4.16E-05	2.3 U	0.00E+00	2.3 U	0.00E+00
7/15/2011		13417	4472	170	140	4.92E-04	1.2 U	0.00E+00	390	1.02E-03	1.2 U	0.00E+00	2.2	5.62E-06	47	1.20E-04	1.2 U	0.00E+00	170	7.43E-04	14	4.85E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	150	5.27E-04	1.1 U	0.00E+00	210	5.48E-04	1.1 U	0.00E+00	2.1	5.37E-06	36	9.20E-05	1.1									

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/10/2009		159	53	140	140 U	0.00E+00	140 U	0.00E+00	17000	2.38E-02	140 U	0.00E+00	560	1.12E-03	250	5.76E-04	1800	4.15E-03	470	1.08E-03	3800	4.79E-03	140 U	0.00E+00	2.25E-01	11.91
12/22/2009		372	124	140	26 U	0.00E+00	26 U	0.00E+00	1700	2.38E-03	26 U	0.00E+00	32	6.40E-05	26 U	0.00E+00	26 U	0.00E+00	100 U	0.00E+00	26 U	0.00E+00	4.67E-02	15.23		
2/24/2010		1893	631	150	6.0 U	0.00E+00	6.0 U	0.00E+00	130	1.95E-04	19	3.45E-05	6.0 U	0.00E+00	6.0 U	0.00E+00	6.0 U	0.00E+00	98	1.32E-04	370	6.20E-04	9.52E-03	20.06		
3/15/2010		2345	782	140	8.4 U	0.00E+00	8.4 U	0.00E+00	170	2.38E-04	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	34 U	0.00E+00	8.4 U	0.00E+00	1.30E-02	22.02		
4/14/2010		2804	935	150	12 U	0.00E+00	12 U	0.00E+00	320	4.80E-04	14	2.54E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	50 U	0.00E+00	12 U	0.00E+00	2.10E-02	25.22		
5/13/2010		3495	1165	140	7.0 U	0.00E+00	7.0 U	0.00E+00	100	1.40E-04	12	2.03E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.10E-02	27.75		
6/21/2010		4430	1477	108	8.6 U	0.00E+00	8.6 U	0.00E+00	87 J	9.40E-05	10	1.31E-05	8.6 U	0.00E+00	8.6 U	0.00E+00	8.6 U	0.00E+00	34 J	3.31E-05	8.6 U	0.00E+00	7.86E-03	30.20		
7/21/2010		5058	1686	140	7.0 U	0.00E+00	7.0 U	0.00E+00	60	8.40E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.11E-02	32.52		
8/23/2010		5784	1928	0	8.2 U	0.00E+00	8.2 U	0.00E+00	38	0.00E+00	24	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	53	0.00E+00	8.2 U	0.00E+00	0.00E+00	32.52		
9/23/2010		6523	2174	145	7.2 U	0.00E+00	7.2 U	0.00E+00	15	2.18E-05	17	2.99E-05	7.2 U	0.00E+00	7.2 U	0.00E+00	7.2 U	0.00E+00	29 U	0.00E+00	7.2 U	0.00E+00	7.99E-03	34.49		
10/22/2010		7219	2406	140	5.0 U	0.00E+00	5.0 U	0.00E+00	11	1.54E-05	7.1	1.20E-05	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	45	5.67E-05	5.0 U	0.00E+00	5.91E-03	35.86		
10/22/2010	Dup	7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	41 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	1.15E-02	37.16		
11/15/2010		7794	2598	140	4.3 U	0.00E+00	4.3 U	0.00E+00	12	1.68E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	5.73E-03	36.96		
12/22/2010		8508	2777	150	4.2 U	0.00E+00	4.2 U	0.00E+00	10	1.50E-05	5.3	9.63E-06	4.2 U	0.00E+00	4.2 U	0.00E+00	4.2 U	0.00E+00	16 NJ	2.16E-05	4.2 U	0.00E+00	7.08E-03	38.22		
1/24/2011		9302	2975	170	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	21 U	0.00E+00	5.2 U	0.00E+00	6.28E-03	39.47		
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	5.48E-03	40.53				
3/18/2011		10573	3293	165	6.3 U	0.00E+00	6.3 U	0.00E+00	25	2.00E-05	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	25 U	0.00E+00	5.97E-03	41.27				
4/15/2011		11241	3460	160	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	5.24E-03	42.15		
5/19/2011		12061	3665	160	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	3.52E-03	42.87		
6/16/2011		12722	3830	170	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	9.2 U	0.00E+00	3.12E-03	43.39		
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.5	3.09E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.4	1.13E-05	4.6 U	0.00E+00	2.44E-03	44.96		
8/22/2011		14324	4775	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	6.7	1.38E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	44 J,B	6.74E-05	4.5 U	0.00E+00	2.10E-03	45.59		
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	5.6	8.57E-06	4.5 U	0.00E+00	1.75E-03	45.93		
10/14/2011		15598	5199	160	0.74 U	0.00E+00	0.74 U	0.00E+00	3.0 U	0.00E+00	0.74 U	0.00E+00	1.8	4.11E-0												

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																										
1/15/2014		28218	8651	160	100	3.31E-04	1.1 U	0.00E+00	30	7.36E-05	1.1 U	0.00E+00	1.3	3.13E-06	4.7	1.13E-05	1.1 U	0.00E+00	69	2.84E-04	9.1	2.97E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/14/2014		29432	8894	160	78	2.58E-04	1.1 U	0.00E+00	34	8.35E-05	1.1 U	0.00E+00	3.8	9.14E-06	6.1	1.47E-05	1.1 U	0.00E+00	30	1.23E-04	7	2.28E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																										
5/15/2014		29914	8990	160	95	3.14E-04	1.2 U	0.00E+00	32	7.86E-05	1.2 U	0.00E+00	1.9	4.57E-06	6	1.44E-05	1.2 U	0.00E+00	55	2.26E-04	6.8	2.22E-05	1.2 U	0.00E+00	12 U	0.00E+00
7/23/2014		31567	9321	160	160	5.29E-04	1.2 U	0.00E+00	41	1.01E-04	1.2 U	0.00E+00	3.6	8.66E-06	9.3	2.24E-05	1.2 U	0.00E+00	170	6.99E-04	18	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																										
9/16/2014		32432	9494	160	480	1.59E-03	2.2 U	0.00E+00	11	2.70E-05	2.2 U	0.00E+00	4	9.62E-06	8.7	2.09E-05	2.2 U	0.00E+00	14	5.76E-05	13	4.24E-05	2.2 U	0.00E+00	22 U	0.00E+00
11/14/2014		33847	9777	160	60	1.99E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.6	3.85E-06	3.6	8.66E-06	1.1 U	0.00E+00	50	2.06E-04	6.9	2.25E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																										
1/9/2015	Dup	33855	9778	160	86	2.85E-04	1.1 U	0.00E+00	20	4.91E-05	1.1 U	0.00E+00	1.1	2.65E-06	4.0	9.62E-06	1.1 U	0.00E+00	55	2.26E-04	8.2	2.67E-05	1.1 U	0.00E+00	11 U	0.00E+00
1/9/2015	-	-	-	160	84	2.78E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6	1.11E-05	1.2 U	0.00E+00	80	3.29E-04	8.6	2.80E-05	1.2 U	0.00E+00	12 U	0.00E+00
3/13/2015		35189	10045	160	58	1.92E-04	1.3 U	0.00E+00	17	4.17E-05	1.3 U	0.00E+00	2.4	5.77E-06	3.6	8.66E-06	1.3 U	0.00E+00	32	1.32E-04	5.8	1.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																										
5/15/2015		35194	10046	160	63	2.08E-04	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	2.3 U	0.00E+00	2.7	6.49E-06	2.3 U	0.00E+00	67	2.76E-04	7.1	2.31E-05	2.3 U	0.00E+00	23 U	0.00E+00
7/16/2015		36677	10343	160	110	3.64E-04	1.1 U	0.00E+00	32	7.86E-05	1.1 U	0.00E+00	3.1	7.45E-06	6.7	1.61E-05	1.1 U	0.00E+00	170	6.99E-04	19	6.19E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																										
9/22/2015		36680	10343	160	150	4.96E-04	1.4 U	0.00E+00	29	7.12E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6	1.35E-05	1.4 U	0.00E+00	250	1.03E-03	20	6.52E-05	1.4 U	0.00E+00	14 U	0.00E+00
11/20/2015		38094	10626	160	41	1.36E-04	1.0 U	0.00E+00	9.5	2.33E-05	1.0 U	0.00E+00	1.3	3.13E-06	2.5	6.01E-06	1.0 U	0.00E+00	46	1.89E-04	7.7	2.51E-05	1.0 U	0.00E+00	10 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																										
1/19/2016		38101	10627	160	80	2.65E-04	1.1 U	0.00E+00	15	3.68E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.8	6.73E-06	1.1 U	0.00E+00	100	4.11E-04	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/18/2016		39377	10883	160	48	1.59E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.9	4.57E-06	3.6	8.66E-06	1.1 U	0.00E+00	43	1.77E-04	7.7	2.51E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																										
5/19/2016		39382	10884	160	55	1.82E-04	0.98 U	0.00E+00	14	3.44E-05	0.98 U	0.00E+00	0.98 U	0.00E+00	2.8	6.73E-06	0.98 U	0.00E+00	70	2.88E-04	8.3	2.71E-05	0.98 U	0.00E+00	9.8 U	0.00E+00
7/22/2016		40915	11190	160	94	3.11E-04	1.2 U	0.00E+00	22	5.40E-05	1.2 U	0.00E+00	2.3	5.53E-06	4.9	1.18E-05	1.2 U	0.00E+00	210	8.64E-04	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																										
9/20/2016		40918	11191	160	120	3.97E-04	1.0 U	0.00E+00	16	3.93E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	3.3	7.94E-06	1.0 U	0.00E+00	260	1.07E-03	15	4.89E-05	1.0 U	0.00E+00	10 U	0.00E+00
11/28/2016		42571	11521	160	50	1.65E-04	1.1 U	0.00E+00	16	3.93E-05	1.1 U	0.00E+00	2.4	5.77E-06	3.2	7.70E-06	1.1 U	0.00E+00	91	3.74E-04	9.7	3.16E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																										
1/24/2017		42575	11522	170	45	1.58E-04	1.1 U	0.00E+00	12	3.13E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.09E-06	1.1 U	0.00E+00	49	2.14E-04	6.2	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/23/2017		43840	11775	160	36	1.19E-04	1.2 U	0.00E+00	14	3.44E-05	1.2 U	0.00E+00	2.1	5.05E-06	2.8	6.73E-06	1.2 U	0.00E+00	43	1.77E-04	6.4	2.09E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																										
5/15/2017		43846	11776	160	49	1.62E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.6	6.25E-06	1.1 U	0.00E+00	67	2.76E-04	7.5	2.44E-05	1.1 U	0.00E+00	11 U	0.00E+00
7/20/2017		45423	12092	170	89	3.13E-04	1.2 U	0.00E+00	18	4.69E-05	1.2 U	0.00E+00	2	5.11E-06	4.7	1.20E-05	1.2 U	0.00E+00	190	8.30E-04	19	6.58E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																										
9/14/2017		45432	12094	160	130	4.30E-04	1.1 U	0.00E+00	19	4.66E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	8.18E-06	1.1 U	0.00E+00	300	1.23E-03	23	7.50E-05	1.1 U	0.00E+00	11 U	0.00E+00
11/17/2017		46966	12400	160	43	1.42E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.7	4.09E-06	3.4	8.18E-06	1.1 U	0.00E+00	86	3.54E-04	12	3.91E-05	1.1 U	0.00E+00	11 U	0.00E+00

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)			
Pulse-off period		November 18, 2013 to January 15, 2014																									
1/15/2014		28218	8651	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	7.32E-04	49.36			
3/14/2014		29432	8894	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	5.12E-04	49.48					
Pulse-off period		March 14, 2014 to May 15, 2014																									
5/15/2014		29914	8990	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	6.60E-04	49.54			
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.42E-03	50.01					
Pulse-off period		July 23, 2014 to September 16, 2014																									
9/16/2014		32432	9494	160	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.75E-03	50.32			
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	4.74E-04	50.45					
Pulse-off period		November 14, 2014 to January 9, 2015																									
1/9/2015		33855	9778	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	5.99E-04	50.45			
1/9/2015	Dup	-	-	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	6.95E-04	-					
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	3.99E-04	50.56					
Pulse-off period		March 13, 2015 to May 15, 2015																									
5/15/2015		35194	10046	160	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.2 U	0.00E+00	5.51E-04	50.56			
7/16/2015		36677	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.23E-03	50.92					
Pulse-off period		July 16, 2015 to September 22, 2015																									
9/22/2015		36680	10343	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	2.2	5.79E-06	3.4	8.95E-06	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	1.69E-03	50.92	
11/20/2015		38094	10626	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.5	3.43E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 U	0.00E+00	3.86E-04	51.03			
Pulse-off period		November 20, 2015 to January 19, 2016																									
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.2 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.2 U	0.00E+00	7.56E-04	51.03			
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	4.18E-04	51.14					
Pulse-off period		March 18, 2016 to May 19, 2016																									
5/19/2016		39382	10884	160	0.98 U	0.00E+00	0.98 U	0.00E+00	3.9 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	9.8 U	0.00E+00	3.8 U	0.00E+00	5.38E-04	51.14			
7/22/2016		40915	11190	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.29E-03	51.54					
Pulse-off period		July 22, 2016 to September 20, 2016																									
9/20/2016		40918	11191	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.3	2.97E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 U	0.00E+00	1.57E-03	51.54			
11/28/2016		42571	11521	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	6.24E-04	51.74					
Pulse-off period		November 28, 2016 to January 24, 2017				</																					

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																										
1/22/2018		46970	12401	160	37	1.22E-04	1.3 U	0.00E+00	8.0	1.96E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.1	5.05E-06	1.3 U	0.00E+00	58	2.39E-04	6.5	2.12E-05	1.3 U	0.00E+00	13 U	0.00E+00
3/23/2018		48239	12655	160	27	8.93E-05	1.2 U	0.00E+00	7.2	1.77E-05	1.2 U	0.00E+00	1.2	2.89E-06	1.9	4.57E-06	1.2 U	0.00E+00	40	1.65E-04	5.8	1.89E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																										
5/21/2018		48239	12655	160	36	1.19E-04	1.2 U	0.00E+00	8.0	1.96E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.7	4.09E-06	1.2 U	0.00E+00	68	2.80E-04	7.2	2.35E-05	1.2 U	0.00E+00	12 U	0.00E+00
7/26/2018		49825	12972	160	100	3.31E-04	1.2 U	0.00E+00	16.0	3.93E-05	1.2 U	0.00E+00	2.4	5.77E-06	3.2	7.70E-06	1.2 U	0.00E+00	250	1.03E-03	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																										
9/17/2018		51096	13226	160	140	4.63E-04	1.2 U	0.00E+00	20.0	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.1	7.46E-06	1.2 U	0.00E+00	340	1.40E-03	23	7.50E-05	1.2 U	0.00E+00	12 U	0.00E+00
11/19/2018		52604	13528	160	40	1.32E-04	1.3 U	0.00E+00	9.9	2.43E-05	1.3 U	0.00E+00	1.6	3.85E-06	2.3	5.53E-06	1.3 U	0.00E+00	82	3.37E-04	12	3.91E-05	1.3 U	0.00E+00	13 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																										
1/21/2019		52607	13529	160	36	1.19E-04	1.2 U	0.00E+00	7.1	1.74E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.4	3.37E-06	1.2 U	0.00E+00	43	1.77E-04	7.3	2.38E-05	1.2 U	0.00E+00	12 U	0.00E+00
3/21/2019		53941	13795	160	24	7.94E-05	1.4 U	0.00E+00	8.6	2.11E-05	1.4 U	0.00E+00	2.4	5.77E-06	1.8	4.33E-06	1.4 U	0.00E+00	28	1.15E-04	6.8	2.22E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																										
5/24/2019		53943	13796	175	38	1.38E-04	1.3 U	0.00E+00	9.2	2.47E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.47E-06	1.3 U	0.00E+00	58	2.61E-04	8.1	2.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
7/29/2019		55529	14113	160	130	4.30E-04	1.4 U	0.00E+00	14.0	3.44E-05	1.4 U	0.00E+00	2.3	5.53E-06	4.5	1.08E-05	1.4 U	0.00E+00	100	4.11E-04	8.9	2.90E-05	1.4 U	0.00E+00	14 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																										
9/27/2019		55531	14113	180	180	6.70E-04	1.3 U	0.00E+00	11.0	3.04E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.60E-06	1.3 U	0.00E+00	140	6.48E-04	12	4.40E-05	1.3 U	0.00E+00	13 U	0.00E+00
12/9/2019		57186	14444	180	88	3.28E-04	1.2 U	0.00E+00	4.2	1.16E-05	1.2 U	0.00E+00	1.4	3.79E-06	1.6	4.33E-06	1.2 U	0.00E+00	19	8.79E-05	4.6	1.69E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																										
1/21/2020		57189	14445	180	50	1.86E-04	1.3 U	0.00E+00	3.7	1.02E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	16	7.40E-05	1.7	6.23E-06	1.3 U	0.00E+00	13 U	0.00E+00
3/20/2020		58462	14700	180	36	1.34E-04	1.3 U	0.00E+00	5.9	1.63E-05	1.3 U	0.00E+00	1.9	5.14E-06	1.4	3.79E-06	1.3 U	0.00E+00	13	6.02E-05	4.8	1.76E-05	1.3 U	0.00E+00	13	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or

When a duplicate sample was collected

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)		
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)				
Pulse-off period	November 17, 2017 to January 22, 2018																											
1/22/2018		46970	12401	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	4.07E-04	52.42				
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.98E-04	52.49				
Pulse-off period	March 23, 2018 to May 21, 2018																											
5/21/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	4.46E-04	52.49				
7/26/2018		49825	12972	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.6	5.21E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.48E-03	52.96				
Pulse-off period	July 26, 2018 to September 17, 2018																											
9/17/2018		51096	13226	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	1.99E-03	53.47				
11/19/2018		52604	13528	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	5.42E-04	53.63				
Pulse-off period	November 19, 2018 to January 21, 2019																											
1/21/2019		52607	13529	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.44E-04	53.63				
3/21/2019		53941	13795	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	2.48E-04	53.70				
Pulse-off period	March 21, 2019 to May 24, 2019																											
5/24/2019		53943	13796	175	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	4.57E-04	53.70				
7/29/2019		55529	14113	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	9.21E-04	53.99				
Pulse-off period	July 29, 2019 to September 27, 2019																											
9/27/2019		55531	14113	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.40E-03	53.99				
12/9/2019		57186	14444	180	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.4	5.13E-06	11	2.83E-05	1.2 U	0.00E+00	4.1	1.21E-05	12 U	0.00E+00	4.7 U	0.00E+00	1.58E-03	54.52				
Pulse-off period	December 9, 2019 to January 21, 2020																											
1/21/2020		57189	14445	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	28	1.03E-04	75	1.93E-04	9.4	2.79E-05	25	2.89E-09	7.8	1.08E-03	43	6.97E-05	5.1 U	0.00E+00	1.75E-03	54.52		
3/20/2020		58462	14700	180	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	1.32E-03	54.85				

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/11/2009	Dup	178	59	150	40000	1.24E-01	86 U	0.00E+00	21000	4.83E-02	86 U	0.00E+00	4500	1.01E-02	25000	5.64E-02	86 U	0.00E+00	1500	5.78E-03
12/15/2009		205	68	140	27000	7.82E-02	110 U	0.00E+00	14000	3.01E-02	110 U	0.00E+00	3100	6.52E-03	16000	3.37E-02	110 U	0.00E+00	950	3.42E-03
12/29/2009		539	180	140	24000	6.95E-02	100 U	0.00E+00	9100	1.95E-02	100 U	0.00E+00	2100	4.42E-03	9200	1.94E-02	100 U	0.00E+00	1000	3.60E-03
1/13/2010		903	301	150	9100	2.82E-02	35 U	0.00E+00	3700	8.52E-03	35 U	0.00E+00	880	1.98E-03	3200	7.21E-03	35 U	0.00E+00	610	2.35E-03
1/27/2010		1224	408	150	13000	4.03E-02	40 U	0.00E+00	4300	9.90E-03	40 U	0.00E+00	1100	2.48E-03	3900	8.79E-03	40 U	0.00E+00	600	2.31E-03
1/27/2010		1224	408	150	14000	4.34E-02	40 U	0.00E+00	4800	1.10E-02	40 U	0.00E+00	1200	2.71E-03	4400	9.92E-03	40 U	0.00E+00	630	2.43E-03
2/24/2010		1893	631	150	8000	2.48E-02	22 U	0.00E+00	3000	6.90E-03	22 U	0.00E+00	520	1.17E-03	2300	5.19E-03	22 U	0.00E+00	200	7.71E-04
3/15/2010		2345	782	140	17000	4.92E-02	48 U	0.00E+00	8000	1.72E-02	48 U	0.00E+00	1100	2.31E-03	6300	1.33E-02	48 U	0.00E+00	860	3.10E-03
4/14/2010		2804	935	150	8400	2.61E-02	23 U	0.00E+00	2200	5.06E-03	23 U	0.00E+00	480	1.08E-03	2000	4.51E-03	23 U	0.00E+00	1300	5.01E-03
5/13/2010		3495	1165	140	8000	2.32E-02	11 U	0.00E+00	3100	6.66E-03	11 U	0.00E+00	480	1.01E-03	2800	5.89E-03	11 U	0.00E+00	380	1.37E-03
6/21/2010		4430	1477	108	5800	1.30E-02	23 U	0.00E+00	3000 J	4.97E-03	23 U	0.00E+00	360 J	5.84E-04	2100	3.41E-03	23 U	0.00E+00	300	8.33E-04
7/21/2010		5058	1686	140	4500	1.30E-02	14 U	0.00E+00	1600	3.44E-03	14 U	0.00E+00	280	5.89E-04	1200	2.53E-03	14 U	0.00E+00	260	9.36E-04
8/23/2010		5784	1928	0	7100	0.00E+00	20 U	0.00E+00	2700	0.00E+00	20 U	0.00E+00	290	0.00E+00	1400	0.00E+00	20 U	0.00E+00	620	0.00E+00
9/23/2010		6523	2174	145	4300	1.29E-02	12 U	0.00E+00	1600	3.56E-03	12 U	0.00E+00	270	5.88E-04	940	2.05E-03	12 U	0.00E+00	290	1.08E-03
10/22/2010		7219	2406	140	2500	7.24E-03	10 U	0.00E+00	890	1.91E-03	10 U	0.00E+00	110	2.31E-04	470	9.89E-04	10 U	0.00E+00	180	6.48E-04
11/15/2010		7794	2598	140	3200	9.27E-03	11 U	0.00E+00	1100	2.36E-03	11 U	0.00E+00	130	2.74E-04	440	9.26E-04	11 U	0.00E+00	120	4.32E-04
12/22/2010		8508	2955	150	4000	1.24E-02	14 U	0.00E+00	1500	3.45E-03	14 U	0.00E+00	240	5.41E-04	730	1.65E-03	14 U	0.00E+00	72	2.78E-04
1/24/2011		9302	3352	170	780	2.74E-03	2.7 U	0.00E+00	800	2.09E-03	2.7 U	0.00E+00	22	5.62E-05	390	9.96E-04	2.7 U	0.00E+00	26	1.14E-04
2/25/2011		10071	3737	165	1500	5.12E-03	4.0 U	0.00E+00	1100	2.78E-03	4.0 U	0.00E+00	44	1.09E-04	560	1.39E-03	4.0 U	0.00E+00	32	1.36E-04
3/18/2011		10573	3988	165	370	1.26E-03	1.0 U	0.00E+00	160	4.05E-04	1.0 U	0.00E+00	11	2.73E-05	62	1.54E-04	1.0 U	0.00E+00	19	8.06E-05
4/15/2011		11241	4322	160	300 J,B	9.93E-04	1.0 U	0.00E+00	95	2.33E-04	1.0 U	0.00E+00	12	2.89E-05	41	9.86E-05	1.0 U	0.00E+00	20	8.23E-05
5/19/2011		12061	4732	160	93	3.08E-04	1.1 U	0.00E+00	39	9.57E-05	1.1 U	0.00E+00	3.5	8.42E-06	21	5.05E-05	1.1 U	0.00E+00	14	5.76E-05
6/16/2011		12722	5062	170	99	3.48E-04	1.2 U	0.00E+00	48	1.25E-04	1.2 U	0.00E+00	2.4	6.13E-06	21	5.37E-05	1.2 U	0.00E+00	30	1.31E-04
7/15/2011		13417	4472	170	77	2.71E-04	1.2 U	0.00E+00	25	6.52E-05	1.2 U	0.00E+00	1.7	4.34E-06	18	4.60E-05	1.2 U	0.00E+00	30	1.31E-04
8/22/2011		14324	4775	170	78	2.74E-04	1.2 U	0.00E+00	31	8.09E-05	1.2 U	0.00E+00	1.2	3.07E-06	17	4.34E-05	1.2 U	0.00E+00	54	2.36E-04
9/15/2011		14905	4968	170	69	2.43E-04	1.1 U	0.00E+00	20	5.22E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	12	3.07E-05	1.1 U	0.00E+00	32	1.40E-04
10/14/2011		15598	5199	160	43	1.42E-04	0.82 U	0.00E+00	12	2.95E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	6.3	1.52E-05	0.82 U	0.00E+00	8.4	3.46E-05
11/21/2011		16510	5503	170	28 J,B	9.85E-05	1.6 U	0.00E+00	7.7	2.01E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	4.1	1.05E-05	1.6 U	0.00E+00	7	3.06E-05
12/14/2011		17010	5670	170	26	9.14E-05	0.76 U	0.00E+00	5.2	1.36E-05	0.76 U	0.00E+00								

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/11/2009	Dup	178	59	150	330	1.01E-03	4400	6.40E-03	86 U	0.00E+00	86 U	0.00E+00	86 U	0.00E+00	210	3.15E-04	86 U	0.00E+00	200	4.29E-04
12/15/2009		205	68	140	240	6.84E-04	3500	4.75E-03	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	370	5.18E-04	110 U	0.00E+00	140	2.80E-04
12/29/2009		539	180	140	240	6.84E-04	1500	2.03E-03	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	120	1.68E-04	100 U	0.00E+00	100 U	0.00E+00
1/13/2010		903	301	150	130	3.97E-04	250	3.63E-04	35 U	0.00E+00	35 U	0.00E+00	35 U	0.00E+00	170	2.55E-04	35 U	0.00E+00	35 U	0.00E+00
1/27/2010		1224	408	150	150	4.58E-04	200	2.91E-04	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	120	1.80E-04	40 U	0.00E+00	40 U	0.00E+00
1/27/2010		1224	408	150	180	5.50E-04	240	3.49E-04	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	130	1.95E-04	40 U	0.00E+00	40 U	0.00E+00
2/24/2010		1893	631	150	98	2.99E-04	73	1.06E-04	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	38	5.70E-05	22 U	0.00E+00	22 U	0.00E+00
3/15/2010		2345	782	140	210	5.99E-04	62	8.41E-05	48 U	0.00E+00	48 U	0.00E+00	48 U	0.00E+00	180	2.52E-04	48 U	0.00E+00	48 U	0.00E+00
4/14/2010		2804	935	150	190	5.81E-04	69	1.00E-04	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23	0.00E+00	23 U	0.00E+00	23 U	0.00E+00
5/13/2010		3495	1165	140	78	2.22E-04	42	5.70E-05	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	20	2.80E-05	11 U	0.00E+00	11 U	0.00E+00
6/21/2010		4430	1477	108	88	1.94E-04	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	33 J	3.56E-05	23 U	0.00E+00	23 U	0.00E+00
7/21/2010		5058	1686	140	80	2.28E-04	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
8/23/2010		5784	1928	0	150	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	21	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
9/23/2010		6523	2174	145	74	2.19E-04	12	1.69E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00
10/22/2010		7219	2406	140	42	1.20E-04	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00
11/15/2010		7794	2598	140	35	9.98E-05	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00
12/22/2010		8508	2955	150	27	8.25E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
1/24/2011		9302	3352	170	9	3.12E-05	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	3.1	7.53E-06
2/25/2011		10071	3737	165	15	5.04E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3988	165	7.3	2.45E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
4/15/2011		11241	4322	160	8.5	2.77E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
5/19/2011		12061	4732	160	11	3.59E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	8.1	1.57E-05	1.1 U	0.00E+00
6/16/2011		12722	5062	170	15	5.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.9	3.91E-06	1.2 U	0.00E+00
7/15/2011		13417	4472	170	21	7.27E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	5.3	1.09E-05	1.2 U	0.00E+00
8/22/2011		14324	4775	170	22	7.62E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00
9/15/2011		14905	4968	170	18	6.23E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	4.6	9.47E-06	1.1 U	0.00E+00
10/14/2011		15598	5199	160	9.1	2.97E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	3.3 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00
11/21/2011		16510	5503	170	5.1	1.77E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00
12/14/2011		17010	5670	170	3.4	1.18E-05	0.76 U	0.00E+00	7.6 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.78	1.61E-06	0.76 U	0.00E+0

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Cumulative Mass Removal (lb)	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/11/2009	Dup	178	59	150	86 U	0.00E+00	240	5.93E-04	110	2.72E-04	340 U	0.00E+00	86 U	0.00E+00	2.54E-01	15.05
12/15/2009		205	68	140	110 U	0.00E+00	230	5.30E-04	110 U	0.00E+00	430 U	0.00E+00	110 U	0.00E+00	1.59E-01	16.48
12/29/2009		539	180	140	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.19E-01	29.76
1/13/2010		903	301	150	35 U	0.00E+00	35 U	0.00E+00	35 U	0.00E+00	140 U	0.00E+00	35 U	0.00E+00	4.93E-02	35.75
1/27/2010		1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	6.47E-02	42.68
1/27/2010		1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	7.06E-02	43.31
2/24/2010		1893	631	150	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	87 U	0.00E+00	22 U	0.00E+00	3.93E-02	51.44
3/15/2010		2345	782	140	48 U	0.00E+00	48 U	0.00E+00	48 U	0.00E+00	190 U	0.00E+00	48 U	0.00E+00	8.60E-02	64.40
4/14/2010		2804	935	150	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	4.24E-02	70.89
5/13/2010		3495	1165	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	3.84E-02	79.74
6/21/2010		4430	1477	108	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	2.30E-02	86.90
7/21/2010		5058	1686	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	58 U	0.00E+00	14 U	0.00E+00	2.07E-02	91.24
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	91.24
9/23/2010		6523	2174	145	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	2.04E-02	96.27
10/22/2010		7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	42 U	0.00E+00	10 U	0.00E+00	1.11E-02	98.85
11/15/2010		7794	2598	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	44 U	0.00E+00	11 U	0.00E+00	1.34E-02	101.41
12/22/2010		8508	2955	150	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	56 U	0.00E+00	14 U	0.00E+00	1.84E-02	107.99
1/24/2011		9302	3352	170	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	11 U	0.00E+00	11	2.09E-05	6.06E-03	110.39
2/25/2011		10071	3737	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	9.59E-03	114.08
3/18/2011		10573	3988	165	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	15	2.23E-05	4.0 U	0.00E+00	1.98E-03	114.57
4/15/2011		11241	4322	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	8.2 J,B	1.18E-05	4.1 U	0.00E+00	1.48E-03	115.07
5/19/2011		12061	4732	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.58E-05	4.5 U	0.00E+00	5.87E-04	115.31
6/16/2011		12722	5062	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.7 U	0.00E+00	7.49E-04	115.55
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.6 U	0.00E+00	6.30E-04	115.18
8/22/2011		14324	4775	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8 J,B	1.04E-05	4.7 U	0.00E+00	7.28E-04	115.40
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.68E-05	4.5 U	0.00E+00	5.54E-04	115.51
10/14/2011		15598	5199	160	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	5	7.20E-06	3.3 U	0.00E+00	2.58E-04	115.57
11/21/2011		16510	5503	170	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 UJ	0.00E+00	6.4 U	0.00E+00	1.77E-04	115.62
12/14/2011		17010	5670	170	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	7.6 UJ	0.00E+00	3.0 U	0.00E+00	1.65E-04	115.65
1/19/2012		17923	5974	170	0.79	2.21E-06	1.5	4.20E-06	1.1	3.08E-06	14	2.14E-05	3.0 U	0.00E+00	1.80E-04	115.71
2/15/2012		18566	6189	170	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	7.9	1.21E-05	2.9 U	0.00E+00	1.83E-04	115.74
3/15/2012		19262	6421	170	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	8.9	1.36E-05	2.8 U	0.00E+00	1.75E-04	115.79
4/19/2012		20102	6701	160	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	1.88E-04	115.84
5/16/2012		20748	6916	160	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00	1.94E-04	115.88
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	21	3.03E-05	5.3 U	0.00E+00	1.79E-03	116.20
9/17/2012		21952	7317	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1							

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	240	7.94E-04	1.1 U	0.00E+00	99	2.43E-04	1.1 U	0.00E+00	4.8	1.15E-05	7.8	1.88E-05	1.1 U	0.00E+00	14	5.76E-05
7/23/2014		31567	9321	160	89	2.95E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.8	4.33E-06	3.7	8.90E-06	1.2 U	0.00E+00	11	4.52E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	310	1.03E-03	2.1 U	0.00E+00	120	2.95E-04	2.1 U	0.00E+00	3.9	9.38E-06	6	1.44E-05	2.1 U	0.00E+00	19	7.82E-05
11/14/2014		33847	9777	160	42	1.39E-04	1.1 U	0.00E+00	7.8	1.91E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	3.85E-06	1.1 U	0.00E+00	11	4.52E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	210	6.95E-04	1.2 U	0.00E+00	69	1.69E-04	1.2 U	0.00E+00	3.7	8.90E-06	3.4	8.18E-06	1.2 U	0.00E+00	8.2	3.37E-05
3/13/2015		35189	10045	160	18	5.96E-05	1.3 U	0.00E+00	5.4	1.33E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.5	1.44E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	240	7.94E-04	1.2 U	0.00E+00	76	1.87E-04	1.2 U	0.00E+00	3.0	7.21E-06	3.5	8.42E-06	1.2 U	0.00E+00	8.2	3.37E-05
7/16/2015		36677	10343	160	64	2.12E-04	1.2 U	0.00E+00	17	4.17E-05	1.2 U	0.00E+00	1.7	4.09E-06	4.2	1.01E-05	1.2 U	0.00E+00	8.6	3.54E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	450	1.49E-03	1.1 U	0.00E+00	210	5.16E-04	1.1 U	0.00E+00	3.4	8.18E-06	9.6	2.31E-05	1.1 U	0.00E+00	28	1.15E-04
11/20/2015		38094	10626	160	43	1.42E-04	1.2 U	0.00E+00	12	2.95E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.5	3.61E-06	1.2 U	0.00E+00	14	5.76E-05
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	260	8.60E-04	1.1 U	0.00E+00	89	2.18E-04	1.1 U	0.00E+00	2.5	6.01E-06	3.2	7.70E-06	1.1 U	0.00E+00	14	5.76E-05
3/18/2016		39377	10883	160	23	7.61E-05	1.1 U	0.00E+00	9.5	2.33E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	3.6	1.48E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	210	6.95E-04	1.2 U	0.00E+00	96	2.36E-04	1.2 U	0.00E+00	2.7	6.49E-06	3.1	7.46E-06	1.2 U	0.00E+00	7	2.88E-05
7/22/2016		40915	11190	160	33	1.09E-04	1.2 U	0.00E+00	13	3.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.8	9.14E-06	1.2 U	0.00E+00	19	7.82E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	280	9.27E-04	1.2 U	0.00E+00	150	3.68E-04	1.2 U	0.00E+00	3.2	7.70E-06	6.9	1.66E-05	1.2 U	0.00E+00	32	1.32E-04
11/28/2016		42571	11521	160	26	8.60E-05	1.1 U	0.00E+00	12	2.95E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.3	5.53E-06	1.1 U	0.00E+00	20	8.23E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	150	5.27E-04	1.1 U	0.00E+00	78	2.03E-04	1.1 U	0.00E+00	2.2	5.62E-06	2.6	6.64E-06	1.1 U	0.00E+00	23	1.01E-04
3/23/2017		43840	11775	160	27	8.93E-05	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.1	5.05E-06	1.1 U	0.00E+00	5.2	2.14E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	150	4.96E-04	1.2 U	0.00E+00	77	1.89E-04	1.2 U	0.00E+00	2.1	5.05E-06	3.4	8.18E-06	1.2 U	0.00E+00	12	4.94E-05
7/20/2017		45423	12092	170	24	8.44E-05	1.2 U	0.00E+00	13	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.3	3.32E-06	1.2 U	0.00E+00	14	6.12E-05
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	12094	160	280	9.27E-04	1.1 U	0.00E+00	250	6.14E-04	1.1 U	0.00E+00	2	4.81E-06	8.4	2.02E-05	1.1 U	0.00E+00	41	1.69E-04
11/17/2017		46966	12400	160	22	7.28E-05	1.2 U	0.00E+00	9.3	2.28E-05	1.2 U	0.0								

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse-off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	6.6	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	16	2.56E-05	1.1 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		31567	9321	160	19	6.19E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	26	8.47E-05	2.1 U	0.00E+00	21 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	8.3 U	0.00E+00	3.5	6.78E-06	2.1 U	0.00E+00
11/14/2014		33847	9777	160	7.3	2.38E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	9.3	3.03E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/13/2015		35189	10045	160	3.0	9.78E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	5.4	1.76E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.0	1.12E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	10343	160	18.0	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	30	9.78E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		38094	10626	160	9.7	3.16E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	8.5	2.77E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	10883	160	3	9.78E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	4.2	1.37E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		40915	11190	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.5	2.91E-06	1.2 U	0.00E+00
Pulse-off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	11521	160	8.9	2.90E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	8.7	3.01E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	11775	160	5.6	1.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	7.4	2.41E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		45423	12092	170	18	6.23E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period March 14, 2014 to May 15, 2014																
5/15/2014		29914	8990	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	25	3.60E-05	11 U	0.00E+00	1.21E-03	117.64
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	4.64E-04	117.79
Pulse-off period July 23, 2014 to September 16, 2014																
9/16/2014		32432	9494	160	2.1 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	1.51E-03	118.05
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.31E-04	118.12
Pulse-off period November 14, 2014 to January 9, 2015																
1/9/2015		33855	9778	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	9.45E-04	118.12
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	9.70E-05	118.15
Pulse-off period March 13, 2015 to May 15, 2015																
5/15/2015		35194	10046	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.06E-03	118.15
7/16/2015		36677	10343	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.62E-04	118.25
Pulse-off period July 16, 2015 to September 22, 2015																
9/22/2015		36680	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	118.26
11/20/2015		38094	10626	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.65E-04	118.33
Pulse-off period November 20, 2015 to January 19, 2016																
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.18E-03	118.33
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.24E-04	118.36
Pulse-off period March 18, 2016 to May 19, 2016																
5/19/2016		39382	10884	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	9.87E-04	118.36
7/22/2016		40915	11190	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.77E-04	118.45
Pulse-off period July 22, 2016 to September 20, 2016																
9/20/2016		40918	11191	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.52E-03	118.45
11/28/2016		42571	11521	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.32E-04	118.53
Pulse-off period November 28, 2016 to January 24, 2017																
1/24/2017		42575	11522	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.74E-04	118.53
3/23/2017		43840	11775	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.61E-04	118.57
Pulse-off period March 23, 2017 to May 15, 2017																
5/15/2017		43846	11776	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	0.00E+00	4.9 U	0.00E+00	7.72E-04	118.57
7/20/2017		45423	12092	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.45E-04	118.65
Pulse-off period July 20, 2017 to September 14, 2017																
9/14/2017		45432	12094	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.84E-03	118.65
11/17/2017		46966	12400	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.50E-04	118.70

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse-off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	12401	160	180	5.96E-04	1.2 U	0.00E+00	90	2.21E-04	1.2 U	0.00E+00	3.0	7.21E-06	3.1	7.46E-06	1.2 U	0.00E+00	10	4.11E-05
3/23/2018		48239	12655	160	3.3	1.09E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	3.6	1.48E-05
Pulse-off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	12656	160	160	5.29E-04	1.3 U	0.00E+00	96	2.36E-04	1.3 U	0.00E+00	2.6	6.25E-06	2.5	6.01E-06	1.3 U	0.00E+00	7.2	2.96E-05
7/26/2018		49825	12972	160	27	8.93E-05	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	2.89E-06	1.2 U	0.00E+00	17	6.99E-05
Pulse-off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	13226	160	290	9.60E-04	1.3 U	0.00E+00	370	9.08E-04	1.3 U	0.00E+00	3.7	8.90E-06	15	3.61E-05	1.3 U	0.00E+00	41	1.69E-04
11/19/2018		52604	13528	160	18	5.96E-05	1.3 U	0.00E+00	13	3.19E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	7.7	3.17E-05
Pulse-off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	13529	160	200	6.62E-04	1.2 U	0.00E+00	110	2.70E-04	1.2 U	0.00E+00	3.2	7.70E-06	3.8	9.14E-06	1.2 U	0.00E+00	16	6.58E-05
3/21/2019		53941	13795	160	16	5.29E-05	1.3 U	0.00E+00	7.9	1.94E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	4.6	1.89E-05
Pulse-off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	13796	175	250	9.05E-04	1.3 U	0.00E+00	160	4.30E-04	1.3 U	0.00E+00	3.4	8.94E-06	4.5	1.18E-05	1.3 U	0.00E+00	8.2	3.69E-05
7/29/2019		55529	14113	160	110	3.64E-04	1.5 U	0.00E+00	16	3.93E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	4.4	1.06E-05	1.5 U	0.00E+00	19	7.82E-05
Pulse-off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	14113	180	290	1.08E-03	1.3 U	0.00E+00	130	3.59E-04	1.3 U	0.00E+00	2.5	6.76E-06	5.2	1.41E-05	1.3 U	0.00E+00	20	9.26E-05
9/27/2019	Dup	-	-	-	290	-	1.3 U	-	130	-	1.3 U	-	2.4	-	4.8	-	1.3 U	-	23	-
12/9/2019		57186	14444	180	35	1.30E-04	1.3 U	0.00E+00	1.6	4.42E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.8	1.76E-05
Pulse-off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	14445	180	130	4.84E-04	1.4 U	0.00E+00	48	1.33E-04	1.4 U	0.00E+00	1.8	4.87E-06	1.7	4.60E-06	1.4 U	0.00E+00	7.7	3.56E-05
3/20/2020		58462	14700	180	36	1.34E-04	1.3 U	0.00E+00	5.9	1.63E-05	1.3 U	0.00E+00	1.9	5.14E-06	1.4	3.79E-06	1.3 U	0.00E+00	13	6.02E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse-off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	12401	160	7.5	2.44E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0	8.00E-06	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	12656	160	3.7	1.21E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	9.3	1.49E-05	1.3 U	0.00E+00	1.3 U	0.00E+00
7/26/2018		49825	12972	160	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	13226	160	24	7.82E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.8	9.28E-06	1.3 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		52604	13528	160	7.2	2.35E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	13529	160	6.6	2.15E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		53941	13795	160	3.2	1.04E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	13796	175	4.8	1.71E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13.0	2.28E-05	1.3 U	0.00E+00	1.23U	0.00E+00
7/29/2019		55529	14113	160	11	3.59E-05	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	5.9 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
Pulse-off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	14113	180	14	5.13E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
9/27/2019	Dup	-	-	-	14	-	1.3 U	-	13 U	-	1.3 U	-	1.3 U	-	5.3 U	-	1.3 U	-	1.3 U	-
12/9/2019		57186	14444	180	1.9	6.97E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	14445	180	2.2	8.07E-06	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		58462	14700	180	4.8	1.76E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		46970	12401	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	9.05E-04	118.70
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.57E-05	118.70
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		48242	12656	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	8.34E-04	118.70
7/26/2018		49825	12972	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.76E-04	118.79
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		51096	13226	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	2.17E-03	119.34
11/19/2018		52604	13528	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	1.47E-04	119.39
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		52607	13529	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.04E-03	119.39
3/21/2019		53941	13795	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.02E-04	119.41
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		53943	13796	175	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	1.43E-03	119.41
7/29/2019		55529	14113	160	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	5.9 U	0.00E+00	5.28E-04	119.58
Pulse -off period July 29, 2019 to September 27, 2019																
9/27/2019		55531	14113	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	1.60E-03	119.58
9/27/2019	Dup	-	-	-	1.3 U	-	1.3 U	-	1.3 U	-	13 U	-	5.3 U	-	-	-
12/9/2019		57186	14444	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.59E-04	119.64
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		57189	14445	180	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	6.70E-04	119.64
3/20/2020		58462	14700	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	2.37E-04	119.70

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/14/2009	Dup	181	60	140	94000	2.72E-01	270 U	0.00E+00	1100	2.36E-03	270 U	0.00E+00	2300	4.84E-03	8100	1.70E-02	270 U	0.00E+00	750	2.70E-03
12/16/2009		229	76	150	46000	1.43E-01	110 U	0.00E+00	710	1.63E-03	110 U	0.00E+00	1100	2.48E-03	5500	1.24E-02	110 U	0.00E+00	400	1.54E-03
1/5/2010		707	236	140	42000	1.22E-01	150 U	0.00E+00	290	6.23E-04	150 U	0.00E+00	980	2.06E-03	1500	3.16E-03	150 U	0.00E+00	240	8.64E-04
1/21/2010		1084	361	150	15000	4.65E-02	42 U	0.00E+00	260	5.98E-04	42 U	0.00E+00	280	6.31E-04	1600	3.61E-03	42 U	0.00E+00	170	6.56E-04
1/21/2010		1084	361	150	16000	4.96E-02	43 U	0.00E+00	280	6.44E-04	43 U	0.00E+00	290	6.54E-04	1700	3.83E-03	43 U	0.00E+00	170	6.56E-04
2/24/2010		1893	631	150	11000	3.41E-02	28 U	0.00E+00	240	5.52E-04	28 U	0.00E+00	280	6.31E-04	1100	2.48E-03	28 U	0.00E+00	140	5.40E-04
3/15/2010		2345	782	140	20000	5.79E-02	21 U	0.00E+00	400	8.59E-04	21 U	0.00E+00	510	1.07E-03	1900	4.00E-03	21 U	0.00E+00	280	1.01E-03
4/14/2010		2804	935	150	31000	9.62E-02	100 U	0.00E+00	380	8.75E-04	100 U	0.00E+00	1100	2.48E-03	1200	2.71E-03	100 U	0.00E+00	820	3.16E-03
5/13/2010		3495	1165	140	8300	2.40E-02	12 U	0.00E+00	220	4.73E-04	12 U	0.00E+00	190	4.00E-04	960	2.02E-03	12 U	0.00E+00	200	7.20E-04
6/21/2010		4430	1477	108	7200	1.61E-02	21 U	0.00E+00	220	3.65E-04	21 U	0.00E+00	150	2.43E-04	660	1.07E-03	21 U	0.00E+00	160	4.44E-04
7/21/2010		5058	1686	140	6100	1.77E-02	20 U	0.00E+00	120	2.58E-04	20 U	0.00E+00	130	2.74E-04	460	9.68E-04	20 U	0.00E+00	120	4.32E-04
8/23/2010		5784	1928	0	8000	0.00E+00	20 U	0.00E+00	200	0.00E+00	20 U	0.00E+00	120	0.00E+00	490	0.00E+00	20 U	0.00E+00	220	0.00E+00
9/23/2010		6523	2174	145	6600	1.98E-02	11 U	0.00E+00	140	3.11E-04	11 U	0.00E+00	140	3.05E-04	440	9.59E-04	11 U	0.00E+00	160	5.96E-04
10/22/2010		7219	2406	140	3700	1.07E-02	14 U	0.00E+00	91	1.95E-04	14 U	0.00E+00	66	1.39E-04	210	4.42E-04	14 U	0.00E+00	110	3.96E-04
11/15/2010		7794	2598	140	4600	1.33E-02	15 U	0.00E+00	120	2.58E-04	15 U	0.00E+00	64	1.35E-04	170	3.58E-04	15 U	0.00E+00	88	3.17E-04
12/22/2010		8508	2777	150	5600	1.74E-02	20 U	0.00E+00	150	3.45E-04	20 U	0.00E+00	120	2.71E-04	330	7.44E-04	20 U	0.00E+00	56	2.16E-04
1/24/2011		9302	2975	170	2200	7.74E-03	8.3 U	0.00E+00	130	3.39E-04	8.3 U	0.00E+00	27	6.90E-05	200	5.11E-04	8.3 U	0.00E+00	35	1.53E-04
2/25/2011		10071	3167	165	1300	4.44E-03	4.0 U	0.00E+00	45	1.14E-04	4.0 U	0.00E+00	25	6.20E-05	72	1.79E-04	4.0 U	0.00E+00	28	1.19E-04
3/18/2011		10573	3293	165	360	1.23E-03	1.3 U	0.00E+00	24	6.08E-05	1.3 U	0.00E+00	5.4	1.34E-05	35	8.68E-05	1.3 U	0.00E+00	13	5.51E-05
4/15/2011		11241	3460	160	160 J,B	5.29E-04	1.0 U	0.00E+00	17	4.17E-05	1.0 U	0.00E+00	2.8	6.73E-06	28	6.73E-05	1.0 U	0.00E+00	15	6.17E-05
5/19/2011		12061	3665	160	64	2.12E-04	1.2 U	0.00E+00	10	2.45E-05	1.2 U	0.00E+00	1.4	3.37E-06	12	2.89E-05	1.2 U	0.00E+00	9.6	3.95E-05
6/16/2011		12722	3830	170	160	5.63E-04	1.2 U	0.00E+00	280	7.30E-04	1.2 U	0.00E+00	2.5	6.39E-06	34	8.69E-05	1.2 U	0.00E+00	61	2.67E-04
7/15/2011		13417	4472	170	190	6.68E-04	1.2 U	0.00E+00	8.3	2.16E-05	1.2 U	0.00E+00	2.8	7.15E-06	23	5.88E-05	1.2 U	0.00E+00	22	9.62E-05
8/22/2011		14324	4775	170	1600	5.63E-03	4.3 U	0.00E+00	19	4.96E-05	4.3 U	0.00E+00	21	5.37E-05	130	3.32E-04	4.3 U	0.00E+00	39	1.70E-04
9/15/2011		14905	4968	170	800	2.81E-03	3.7 U	0.00E+00	9.5	2.48E-05	3.7 U	0.00E+00	12	3.07E-05	62	1.58E-04	3.7 U	0.00E+00	24	1.05E-04
10/14/2011		15598	5199	160	750	2.48E-03	3.0 U	0.00E+00	10	2.45E-05	3.0 U	0.00E+00	13	3.13E-05	37	8.90E-05	3.0 U	0.00E+00	15	6.17E-05
11/21/2011		16510	5503	170	380	1.34E-03	1.4 U	0.00E+00	6.6	1.72E-05	1.4 U	0.00E+00	5.6	1.43E-05	24	6.13E-05	1.4 U	0.00E+00	7.9	3.45E-05
12/14/2011		17010	5670	170	830	2.92E-03	3.5 U	0.00E+00	8.7	2.27E-05	3.5 U	0.00E+00	70	1.79E-04	33	8.43E-05	3.5 U	0.00E+00	6.9	3.02E-05
1/19/2012		17923	5974	170	800	2.81E-03	3.0 U	0.00E+00	12	3.13E-05	3.0 U	0.00E+00	13	3.32E-05	33	8.43E-05	3.0 U	0.		

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/14/2009		181	60	140	1000	2.85E-03	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00
12/16/2009		229	76	150	550	1.68E-03	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00
1/5/2010		707	236	140	250	7.13E-04	150 U	0.00E+00	220	4.06E-04	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00
1/21/2010		1084	361	150	140	4.28E-04	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00
1/21/2010	Dup	1084	361	150	140	4.28E-04	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00
2/24/2010		1893	631	150	66	2.02E-04	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00
3/15/2010		2345	782	140	120	3.42E-04	51	6.92E-05	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
4/14/2010		2804	935	150	190	5.81E-04	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00
5/13/2010		3495	1165	140	43	1.23E-04	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00
6/21/2010		4430	1477	108	55	1.21E-04	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
7/21/2010		5058	1686	140	44	1.25E-04	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
8/23/2010		5784	1928	0	66	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
9/23/2010		6523	2174	145	50	1.48E-04	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00
10/22/2010		7219	2406	140	31	8.84E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
11/15/2010		7794	2598	140	29	8.27E-05	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00
12/22/2010		8508	2777	150	21	6.42E-05	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
1/24/2011		9302	2975	170	17	5.89E-05	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00
2/25/2011		10071	3167	165	16	5.38E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	5.9	1.98E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.9	3.80E-06	1.3 U	0.00E+00
4/15/2011		11241	3460	160	7.7	2.51E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	2.6	5.04E-06	1.0 U	0.00E+00
5/19/2011		12061	3665	160	6.9	2.25E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.9	3.68E-06	1.2 U	0.00E+00
6/16/2011		12722	3830	170	9.8	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00
7/15/2011		13417	4472	170	9.3	3.22E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	21	7.27E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00
9/15/2011		14905	4968	170	14	4.85E-05	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	4.1	8.44E-06	3.7 U	0.00E+00
10/14/2011		15598	5199	160	13	4.24E-05	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
11/21/2011		16510	5503	170	9.2	3.19E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/14/2011		17010	5670	170	22	7.62E-05	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00
1/19/2012		17923	5974	170	12	4.16E-05	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
2/15/2012		18566	6189	170	24	8.31E-05	4.5 U	0.00E+00	4.5 U											

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/14/2009	Dup	181	60	140	270 U	0.00E+00	1600	3.69E-03	510	1.18E-03	1100 U	0.00E+00	270 U	0.00E+00	3.07E-01	18.51
12/16/2009		229	76	150	110 U	0.00E+00	540	1.33E-03	240	5.93E-04	590	7.97E-04	110 U	0.00E+00	1.65E-01	21.16
1/5/2010		707	236	140	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	590 U	0.00E+00	150 U	0.00E+00	1.29E-01	41.78
1/21/2010		1084	361	150	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	170 U	0.00E+00	42 U	0.00E+00	5.25E-02	48.37
1/21/2010		1084	361	150	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	170 U	0.00E+00	43 U	0.00E+00	5.59E-02	48.80
2/24/2010		1893	631	150	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00	3.85E-02	58.76
3/15/2010		2345	782	140	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	6.53E-02	68.60
4/14/2010		2804	935	150	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.06E-01	84.81
5/13/2010		3495	1165	140	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	48 U	0.00E+00	12 U	0.00E+00	2.78E-02	91.21
6/21/2010		4430	1477	108	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	1.83E-02	96.92
7/21/2010		5058	1686	140	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	79 U	0.00E+00	20 U	0.00E+00	1.97E-02	101.05
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	101.05
9/23/2010		6523	2174	145	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	2.21E-02	106.49
10/22/2010		7219	2406	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	55 U	0.00E+00	14 U	0.00E+00	1.20E-02	109.27
11/15/2010		7794	2598	140	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	59 U	0.00E+00	15 U	0.00E+00	1.45E-02	112.05
12/22/2010		8508	2777	150	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	82 U	0.00E+00	20 U	0.00E+00	1.90E-02	115.44
1/24/2011		9302	2975	170	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	33 U	0.00E+00	8.3 U	0.00E+00	8.87E-03	117.20
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	4.96E-03	118.15
3/18/2011		10573	3293	165	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	10	1.49E-05	5.4 U	0.00E+00	1.48E-03	118.34
4/15/2011		11241	3460	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.3 J.B.	1.05E-05	4.1 U	0.00E+00	7.48E-04	118.47
5/19/2011		12061	3665	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	3.34E-04	118.53
6/16/2011		12722	3830	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8	1.04E-05	4.7 U	0.00E+00	1.70E-03	118.81
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.7	1.18E-05	4.8 U	0.00E+00	8.96E-04	119.39
8/22/2011		14324	4775	170	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	6.30E-03	121.30
9/15/2011		14905	4968	170	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	3.19E-03	121.91
10/14/2011		15598	5199	160	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	2.73E-03	122.54
11/21/2011		16510	5503	170	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U.J	0.00E+00	5.5 U	0.00E+00	1.50E-03	123.00
12/14/2011		17010	5670	170	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	380 J	5.82E-04	58	1.10E-04	4.00E-03	123.67
1/19/2012		17923	5974	170	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	3.03E-03	124.59
2/15/2012		18566	6189	170	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	6.70E-03	126.03
3/15/2012		19262	6421	170	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	6.04E-03	127.43
4/19/2012		20102	6701	160	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	7.3 U	0.00E+00	7.3 U	0.00E+00	2.13E-03	128.02
5/16/2012		20748	6916	160	0.80 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	1.16E-03	128.27
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	4.27E-03	129.03
9/17/2012		21952	7317	160	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	65 U	0.00E+00	1.80E-02	133.04
Pulse -off period September 17, 2012 to November 15, 2012								</td								

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	240	7.94E-04	1.2 U	0.00E+00	5	1.23E-05	1.2 U	0.00E+00	4.1	1.36E-05	16	3.85E-05	1.2 U	0.00E+00	18	7.40E-05
3/14/2014		29432	11645	160	72	2.38E-04	1.2 U	0.00E+00	8.7	2.14E-05	1.2 U	0.00E+00	2.4	7.94E-06	6.4	1.54E-05	1.2 U	0.00E+00	9.5	3.91E-05
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	770	2.55E-03	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	12	3.97E-05	86	2.07E-04	2.3 U	0.00E+00	6.9	2.84E-05
7/23/2014		31567	12926	160	130	4.30E-04	1.4 U	0.00E+00	5	1.23E-05	1.4 U	0.00E+00	1.4	4.63E-06	10	2.40E-05	1.4 U	0.00E+00	10	4.11E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	390	1.29E-03	2.4 U	0.00E+00	15	3.68E-05	2.4 U	0.00E+00	3	7.21E-06	8.4	2.02E-05	2.4 U	0.00E+00	17	6.99E-05
11/14/2014		33847	14294	160	180	5.96E-04	1.2 U	0.00E+00	5.2	1.28E-05	1.2 U	0.00E+00	3	9.93E-06	25	6.01E-05	1.2 U	0.00E+00	18	7.40E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	220	7.28E-04	1.1 U	0.00E+00	4.7	1.15E-05	1.1 U	0.00E+00	2.2	5.29E-06	18	4.33E-05	1.1 U	0.00E+00	11	4.52E-05
3/13/2015		35189	15099	160	200	6.62E-04	1.2 U	0.00E+00	4.4	1.08E-05	1.2 U	0.00E+00	3.1	1.03E-05	14	3.37E-05	1.2 U	0.00E+00	4.2	1.73E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	300	9.93E-04	1.2 U	0.00E+00	5.6	1.37E-05	1.2 U	0.00E+00	3.1	7.45E-06	10	2.40E-05	1.2 U	0.00E+00	8.1	3.33E-05
7/16/2015		36677	15992	160	180	5.96E-04	1.2 U	0.00E+00	6.5	1.60E-05	1.2 U	0.00E+00	2.3	7.61E-06	19	4.57E-05	1.2 U	0.00E+00	6	2.47E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	530	1.75E-03	2.3 U	0.00E+00	11	2.70E-05	2.3 U	0.00E+00	2.6	6.25E-06	10	2.40E-05	2.3 U	0.00E+00	18	7.40E-05
11/20/2015		38094	16842	160	64	2.12E-04	1.1 U	0.00E+00	3.2	7.86E-06	1.1 U	0.00E+00	1.2	2.89E-06	5.4	1.30E-05	1.1 U	0.00E+00	7.3	3.00E-05
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	68	2.25E-04	1.1 U	0.00E+00	2.6	6.38E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.13E-06	1.1 U	0.00E+00	12	4.94E-05
3/18/2016		39377	17612	160	66	2.18E-04	1.1 U	0.00E+00	2.4	5.89E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.8	9.14E-06	1.1 U	0.00E+00	2.7	1.11E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	240	7.94E-04	1.1 U	0.00E+00	110	2.70E-04	1.1 U	0.00E+00	2.7	6.49E-06	3.7	8.90E-06	1.1 U	0.00E+00	6.4	2.63E-05
7/22/2016		40915	17921	160	120	3.97E-04	1.3 U	0.00E+00	5.2	1.28E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	9.7	2.33E-05	1.3 U	0.00E+00	9.6	3.95E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	220	7.28E-04	1.2 U	0.00E+00	5.1	1.25E-05	1.2 U	0.00E+00	1.5	3.61E-06	3.9	9.38E-06	1.2 U	0.00E+00	15	6.17E-05
11/28/2016		42571	18915	160	19	6.29E-05	1.0 U	0.00E+00	1.6	3.93E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.2	2.96E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	42	1.48E-04	1.1 U	0.00E+00	1.9	4.96E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	2.7	1.18E-05
3/23/2017		43840	19676	160	130	4.30E-04	1.3 U	0.00E+00	4.1	1.01E-05	1.3 U	0.00E+00	1.8	4.33E-06	9.2	2.21E-05	1.3 U	0.00E+00	2.8	1.15E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	19680	160	120	3.97E-04	1.0 U	0.00E+00	3	7.36E-06	1.0 U	0.00E+00	1.1	2.65E-06	5.2	1.25E-05	1.0 U	0.00E+00	4	1.65E-05
7/20/2017		45423	20626	170	82	2.88E-04	1.1 U	0.00E+00	2.2	5.74E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3	7.67E-06	1.1 U	0.00E+00	7.2	3.15E-05
Pulse -off period July 20, 2017 to September 14, 2017 </																				

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	7.6	2.48E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		29432	11645	160	8.1	2.64E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	20	6.52E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
7/23/2014		31567	12926	160	9	2.93E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	14	4.56E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	3	5.81E-06	2.4 U	0.00E+00
11/14/2014		33847	14294	160	6.2	2.02E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	6	1.96E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		35189	15099	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	10	3.26E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	15992	160	12	3.91E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	14	4.56E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
11/20/2015		38094	16842	160	14	4.56E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	7	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	17612	160	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	4.2	1.37E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		40915	17921	160	9	2.93E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	8.5	2.77E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	18915	160	2.3	7.50E-06	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	2.7	9.35E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	19676	160	6.1	1.99E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014		28218	10916	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	9.57E-04	136.88
3/14/2014		29432	11645	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.48E-04	137.13
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014		29914	11934	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	2.92E-03	137.98
7/23/2014		31567	12926	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	5.42E-04	138.52
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014		32432	13445	160	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	1.48E-03	139.28
11/14/2014		33847	14294	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	1.73E-05	4.6 U	0.00E+00	7.90E-04	139.95
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015		33855	14299	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.53E-04	139.96
3/13/2015		35189	15099	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	7.79E-04	140.58
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015		35194	15102	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.10E-03	140.58
7/16/2015		36677	15992	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.29E-04	141.23
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015		36680	15994	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	1.93E-03	141.24
11/20/2015		38094	16842	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	3.11E-04	141.50
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016		38101	16846	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.05E-04	141.50
3/18/2016		39377	17612	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.80E-04	141.72
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016		39382	17615	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.12E-03	141.72
7/22/2016		40915	17921	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	5.02E-04	141.87
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016		40918	17923	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	8.43E-04	141.87
11/28/2016		42571	18915	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	1.04E-04	141.98
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017		42575	18917	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.74E-04	141.98
3/23/2017		43840	19676	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	4.98E-04	142.36
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017		43846	19680	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	4.51E-04	142.36
7/20/2017		45423	20626	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	3.71E-04	142.71
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017		45432	20632	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	4.68E-04	142.71
11/17/2017		46966	21552	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.94E-04	142.89

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	21554	160	63	2.08E-04	1.2 U	0.00E+00	2.9	7.12E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8	1.97E-05
3/23/2018		48239	22316	160	35	1.16E-04	1.4 U	0.00E+00	1.9	4.66E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	1.5	3.61E-06	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	22318	160	51	1.69E-04	1.2 U	0.00E+00	2.2	5.40E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8	1.97E-05
7/26/2018		49825	23267	160	43	1.42E-04	1.0 U	0.00E+00	3.6	8.84E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.3	3.13E-06	1.0 U	0.00E+00	13	5.35E-05
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	24030	160	110	3.64E-04	1.3 U	0.00E+00	4.7	1.15E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	11	4.52E-05
11/19/2018		52604	24935	160	23	7.61E-05	1.3 U	0.00E+00	3.6	8.84E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.7	4.09E-06	1.3 U	0.00E+00	3.1	1.28E-05
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	24937	160	44	1.46E-04	1.2 U	0.00E+00	3.6	8.84E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.7	2.34E-05
3/21/2019		53941	25737	160	42	1.39E-04	1.3 U	0.00E+00	5.5	1.35E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.7	6.49E-06	1.3 U	0.00E+00	2.4	9.87E-06
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	25738	175	65	2.35E-04	1.3 U	0.00E+00	6.5	1.75E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.5	6.58E-06	1.3 U	0.00E+00	3	1.35E-05
7/29/2019		55529	26690	160	190	6.29E-04	1.5 U	0.00E+00	16.0	3.93E-05	1.5 U	0.00E+00	2.2	5.29E-06	5.8	1.39E-05	1.5 U	0.00E+00	12	4.94E-05
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	26691	180	330	1.23E-03	1.4 U	0.00E+00	13.0	3.59E-05	1.4 U	0.00E+00	2.5	6.76E-06	1.8	4.87E-06	1.4 U	0.00E+00	19	8.79E-05
12/9/2019		57186	34312	180	160	5.96E-04	1.2 U	0.00E+00	5.8	1.60E-05	1.2 U	0.00E+00	2.4	6.49E-06	2.6	7.03E-06	1.2 U	0.00E+00	9.4	4.35E-05
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	34313	180	160	5.96E-04	1.3 U	0.00E+00	5.5	1.52E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.1	5.68E-06	1.3 U	0.00E+00	6.8	3.15E-05
3/20/2020		58462	35077	180	43	1.60E-04	1.3 U	0.00E+00	3.4	9.39E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.8	4.87E-06	1.3 U	0.00E+00	3.2	1.48E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		46970	21554	160	5.9	1.92E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		48239	22316	160	5.8	1.89E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		48242	22318	160	5.9	1.92E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/26/2018		49825	23267	160	11.0	3.59E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.1	2.13E-06	1.0 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		51096	24030	160	11.0	3.59E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		52604	24935	160	8.2	2.67E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		52607	24937	160	4.1	1.34E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		53941	25737	160	6.4	2.09E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		53943	25738	175	5.6	2.00E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
7/29/2019		55529	26690	160	7.4	2.41E-05	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	6.1 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
9/27/2019		55531	26691	180	8.4	3.08E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		57186	34312	180	7.8	2.86E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		57189	34313	180	5.3	1.94E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/20/2020		58462	35077	180	6.4	2.35E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		46970	21554	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.55E-04	142.89
3/23/2018		48239	22316	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	1.43E-04	143.00
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		48242	22318	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.13E-04	143.00
7/26/2018		49825	23267	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	2.46E-04	143.23
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		51096	24030	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	4.57E-04	143.58
11/19/2018		52604	24935	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.29E-04	143.70
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		52607	24937	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.2 U	0.00E+00	1.91E-04	143.70
3/21/2019		53941	25737	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	1.90E-04	143.85
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		53943	25738	175	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	2.93E-04	143.85
7/29/2019		55529	26690	160	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	6.1 U	0.00E+00	7.61E-04	144.57
Pulse -off period July 29, 2019 to September 27, 2019																
9/27/2019		55531	26691	180	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	1.39E-03	144.58
12/9/2019		57186	34312	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	6.97E-04	149.89
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		57189	34313	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	6.67E-04	149.89
3/20/2020		58462	35077	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.13E-04	150.05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	150000	1.55E+00	600 U	0.00E+00	1800	1.38E-02	600 U	0.00E+00	860	6.46E-03	1400	1.05E-02	600 U	0.00E+00
3/18/2011		366	366	500	41000	4.24E-01	150 U	0.00E+00	1000	7.67E-03	150 U	0.00E+00	250	1.88E-03	460	3.46E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	40000	4.14E-01	130 U	0.00E+00	1000	7.67E-03	130 U	0.00E+00	300	2.25E-03	480	3.61E-03	130 U	0.00E+00
3/25/2011		463	463	500	22000	2.28E-01	62 U	0.00E+00	980	7.52E-03	62 U	0.00E+00	87	6.54E-04	290	2.18E-03	62 U	0.00E+00
3/30/2011		558	558	500	25000	2.59E-01	68 U	0.00E+00	820	6.29E-03	68 U	0.00E+00	190	1.43E-03	290	2.18E-03	68 U	0.00E+00
4/8/2011		764	764	500	22000	2.28E-01	80 U	0.00E+00	1000	7.67E-03	80 U	0.00E+00	170	1.28E-03	340	2.56E-03	80 U	0.00E+00
4/15/2011		924	924	500	18000	1.86E-01	84 U	0.00E+00	930	7.13E-03	84 U	0.00E+00	110	8.27E-04	280	2.10E-03	84 U	0.00E+00
4/15/2011	Dup	924	924	500	16000 J	1.65E-01	60 U	0.00E+00	820 J	6.29E-03	60 U	0.00E+00	60 UJ	0.00E+00	260 J	1.95E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	11000	1.14E-01	11 U	0.00E+00	640	4.91E-03	11 U	0.00E+00	100	7.52E-04	190	1.43E-03	11 U	0.00E+00
6/16/2011		2191	2191	420	10000	8.69E-02	11 U	0.00E+00	530	3.42E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
6/16/2011	Dup	2191	2191	420	9600	8.34E-02	11 U	0.00E+00	510	3.29E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
7/15/2011		2750	2750	420	7600	6.60E-02	24 U	0.00E+00	290	1.87E-03	24 U	0.00E+00	58	3.66E-04	79	4.99E-04	24 U	0.00E+00
8/22/2011		3133	3133	420	9000	7.82E-02	27 U	0.00E+00	410	2.64E-03	27 U	0.00E+00	92	5.81E-04	160	1.01E-03	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	9000	7.82E-02	22 U	0.00E+00	400	2.58E-03	22 U	0.00E+00	80	5.05E-04	150	9.47E-04	22 U	0.00E+00
9/15/2011		3630	3630	420	7000	6.08E-02	22 U	0.00E+00	250	1.61E-03	22 U	0.00E+00	55	3.47E-04	97	6.12E-04	22 U	0.00E+00
10/14/2011		4226	4226	420	4400	3.82E-02	19 U	0.00E+00	180	1.16E-03	19 U	0.00E+00	59	3.72E-04	60	3.79E-04	19 U	0.00E+00
11/21/2011		5019	5019	380	3700	2.91E-02	16 U	0.00E+00	170	9.91E-04	16 U	0.00E+00	320	1.83E-03	63	3.60E-04	16 U	0.00E+00
12/14/2011		5343	5343	260	4000	2.15E-02	19 U	0.00E+00	140	5.58E-04	19 U	0.00E+00	300	1.17E-03	55	2.15E-04	19 U	0.00E+00
1/19/2012		5993	5993	0	5200	0.00E+00	24 U	0.00E+00	160	0.00E+00	24 U	0.00E+00	58	0.00E+00	38	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	4200	2.26E-02	19 U	0.00E+00	100	3.99E-04	19 U	0.00E+00	700	2.74E-03	53	2.07E-04	19 U	0.00E+00
3/15/2012		6946	6946	350	4000	2.90E-02	15 U	0.00E+00	120	6.44E-04	15 U	0.00E+00	38	2.00E-04	38	2.00E-04	15 U	0.00E+00
4/19/2012		7629	7629	380	5200	4.09E-02	16 U	0.00E+00	160	9.33E-04	16 U	0.00E+00	42	2.40E-04	43	2.46E-04	16 U	0.00E+00
5/16/2012		8143	8143	420	4100	3.56E-02	15 U	0.00E+00	110	7.09E-04	15 U	0.00E+00	43	2.71E-04	40	2.53E-04	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	5000	4.34E-02	16 U	0.00E+00	98	6.32E-04	16 U	0.00E+00	66	4.17E-04	27	1.70E-04	16 U	0.00E+00
9/17/2012		9033	9033	470	3700	3.60E-02	15 U	0.00E+00	140	1.01E-03	15 U	0.00E+00	15 U	0.00E+00	26	1.84E-04	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																		
11/15/2012		9037	9037	420	4900 J	4.26E-02	28 U	0.00E+00	74 J	4.77E-04	28 U	0.00E+00	110 J	6.94E-04	29 J	1.83E-04	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	8700	7.56E-02	24 U	0.00E+00	200 J	1.29E-03	24 U	0.00E+00	220	1.39E-03	360 J	2.27E-03	24 U	0.00E+00
12/14/2012		9439	9439	150	500	1.55E-03	1.9 U	0.00E+00	14	3.22E-05	1.9 U	0.00E+00	6.8	1.53E-05	18	4.06E-05	1.9 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	520	0.00E+00	2.2 U	0.00E+00	23	0.00E+00	2.2 U	0.00E+00	5.7	0.00E+00	28	0.00E+00	2.2 U	0.00E+00
4/11/2013		9876	9876	340	430	3.02E-03	1.8 U	0.00E+00	26	1.36E-04	1.8 U	0.00E+00	7.1	3.63E-05	28	1.43E-04	1.8 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																		
5/10/2013		9882	9882	340	270	1.90E-03	1.1 U											

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	7200	9.26E-02	3900	3.97E-02	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	2400 U	0.00E+00	600 U	0.00E+00
3/18/2011		366	366	500	2900	3.73E-02	1600	1.63E-02	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	750 J	3.75E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	3000	3.86E-02	1600	1.63E-02	130 UJ	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	1100 J	5.50E-03	130 U	0.00E+00
3/25/2011		463	463	500	3200	4.11E-02	970	9.88E-03	62 U	0.00E+00	61 NJ	4.02E-04	62 U	0.00E+00	62 U	0.00E+00	610	3.05E-03	62 U	0.00E+00
3/30/2011		558	558	500	2500	3.21E-02	1000	1.02E-02	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	470	2.35E-03	68 U	0.00E+00
4/8/2011		764	764	500	2400	3.09E-02	1000	1.02E-02	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	430	2.15E-03	80 U	0.00E+00
4/15/2011		924	924	500	1700	2.19E-02	920	9.37E-03	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	340 U	0.00E+00	84 U	0.00E+00
4/15/2011	Dup	924	924	500	1500 J	1.93E-02	830 J	8.45E-03	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	260 J	1.30E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	1400	1.80E-02	530	5.40E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	67	3.35E-04	26	1.57E-04
6/16/2011		2191	2191	420	1000	1.08E-02	410	3.51E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	46 U	0.00E+00	14	7.12E-05
6/16/2011	Dup	2191	2191	420	960	1.04E-02	400	3.42E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	45 U	0.00E+00	12	6.10E-05
7/15/2011		2750	2750	420	570	6.16E-03	250	2.14E-03	24 U	0.00E+00	28	1.55E-04	24 U	0.00E+00	24 U	0.00E+00	95 U	0.00E+00	24 U	0.00E+00
8/22/2011		3133	3133	420	920	9.93E-03	380	3.25E-03	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	110 U	0.00E+00	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	940	1.02E-02	360	3.08E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
9/15/2011		3630	3630	420	660	7.13E-03	270	2.31E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
10/14/2011		4226	4226	420	390	4.21E-03	180	1.54E-03	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	77 U	0.00E+00	19 U	0.00E+00
11/21/2011		5019	5019	380	360	3.52E-03	180	1.39E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
12/14/2011		5343	5343	260	360	2.41E-03	160	8.47E-04	19 U	0.00E+00	190 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	74 U	0.00E+00	19 U	0.00E+00
1/19/2012		5993	5993	0	320	0.00E+00	180	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	97 U	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	280	1.87E-03	150	7.94E-04	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	78 U	0.00E+00	19 U	0.00E+00
3/15/2012		6946	6946	350	240	2.16E-03	140	9.98E-04	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	58 U	0.00E+00	15 U	0.00E+00
4/19/2012		7629	7629	380	400	3.91E-03	180	1.39E-03	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	62 U	0.00E+00	16 U	0.00E+00
5/16/2012		8143	8143	420	320	3.46E-03	150	1.28E-03	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		8546	8546	420	490	5.29E-03	180	1.54E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
9/17/2012		9033	9033	470	410	4.95E-03	220	2.11E-03	15 U	0.00E+00	150 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		9037	9037	420	260 J	2.81E-03	150 J	1.28E-03	28 U	0.00E+00	280 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	1200 J	1.30E-02	390 J	3.34E-03	24 U	0.00E+00	240 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	94 U	0.00E+00	24 U	0.00E+00
12/14/2012		9439	9439	150	62	2.39E-04	28	8.56E-05	1.9 U	0.00E+00	19 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00</				

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011	Dup	222	222	500	600 U	0.00E+00	600 U	0.00E+00	710	5.84E-03	600 U	0.00E+00	2400 U	0.00E+00	2400 U	0.00E+00	1.72E+00	381.87
3/18/2011		366	366	500	620 J	4.43E-03	150 U	0.00E+00	240	1.98E-03	200	1.65E-03	1500 J	6.75E-03	590 U	0.00E+00	5.09E-01	453.50
3/18/2011		366	366	500	380 J	2.71E-03	130 U	0.00E+00	250	2.06E-03	240	1.98E-03	690 J	3.11E-03	540 U	0.00E+00	4.97E-01	453.50
3/25/2011		463	463	500	140	1.00E-03	62 U	0.00E+00	78	6.42E-04	67	5.51E-04	250 U	0.00E+00	250 U	0.00E+00	2.95E-01	482.07
3/30/2011		558	558	500	190	1.36E-03	68 U	0.00E+00	250	2.06E-03	140	1.15E-03	270 U	0.00E+00	270 U	0.00E+00	3.18E-01	512.25
4/8/2011		764	764	500	200	1.43E-03	120	9.88E-04	560	4.61E-03	260	2.14E-03	320 U	0.00E+00	320 U	0.00E+00	2.91E-01	572.27
4/15/2011		924	924	500	170	1.21E-03	110	9.05E-04	540	4.44E-03	260	2.14E-03	340 U	0.00E+00	340 U	0.00E+00	2.36E-01	610.05
4/15/2011		924	924	500	140 J	1.00E-03	99 J	8.15E-04	540 J	4.44E-03	230 J	1.89E-03	240 J,B	1.08E-03	240 U	0.00E+00	2.12E-01	610.05
5/19/2011		1685	1685	500	100	7.14E-04	140	1.15E-03	920	7.57E-03	420	3.46E-03	81	3.65E-04	43 U	0.00E+00	1.58E-01	730.28
6/16/2011		2191	2191	420	51	3.06E-04	83	5.74E-04	600	4.15E-03	280	1.94E-03	46 J,B	1.74E-04	46 U	0.00E+00	1.14E-01	753.86
6/16/2011		2191	2191	420	53	3.18E-04	78	5.39E-04	580	4.01E-03	270	1.87E-03	69 J,B	2.61E-04	45 U	0.00E+00	1.09E-01	785.55
7/15/2011		2750	2750	420	28	1.68E-04	41	2.83E-04	270	1.87E-03	120	8.30E-04	180	6.81E-04	95 U	0.00E+00	8.10E-02	830.85
8/22/2011		3133	3133	420	35 J	2.10E-04	59 J	4.08E-04	340	2.35E-03	140	9.68E-04	110 U	0.00E+00	110 U	0.00E+00	9.95E-02	868.97
8/22/2011		3133	3133	420	22 UJ	0.00E+00	30 J	2.07E-04	310	2.14E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	9.87E-02	868.65
9/15/2011		3630	3630	420	22 U	0.00E+00	31	2.14E-04	340	2.35E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	7.63E-02	906.88
10/14/2011		4226	4226	420	38	2.28E-04	19 U	0.00E+00	170	1.18E-03	70	4.84E-04	77 U	0.00E+00	77 U	0.00E+00	4.78E-02	935.35
11/21/2011		5019	5019	380	16 U	0.00E+00	17	1.06E-04	220	1.38E-03	100	6.25E-04	160 U	0.00E+00	63 U	0.00E+00	3.93E-02	966.50
12/14/2011		5343	5343	260	19 U	0.00E+00	19 U	0.00E+00	76	3.25E-04	55	2.35E-04	190 UJ	0.00E+00	74 U	0.00E+00	2.73E-02	975.34
1/19/2012		5993	5993	0	36	0.00E+00	24 U	0.00E+00	78	0.00E+00	50	0.00E+00	97 U	0.00E+00	97 U	0.00E+00	0.00E+00	975.34
2/15/2012		6368	6368	260	19 U	0.00E+00	19 U	0.00E+00	58	2.48E-04	40	1.71E-04	300	7.02E-04	78 U	0.00E+00	2.97E-02	986.48
3/15/2012		6946	6946	350	15 U	0.00E+00	15 U	0.00E+00	44	2.53E-04	31	1.79E-04	58 U	0.00E+00	58 U	0.00E+00	3.36E-02	1005.89
4/19/2012		7629	7629	380	16 U	0.00E+00	16 U	0.00E+00	48	3.00E-04	33	2.06E-04	62 U	0.00E+00	62 U	0.00E+00	4.81E-02	1038.74
5/16/2012		8143	8143	420	15 U	0.00E+00	15 U	0.00E+00	28	1.94E-04	23	1.59E-04	61 U	0.00E+00	61 U	0.00E+00	4.19E-02	1060.30
Pulse -off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	63 U	0.00E+00	5.15E-02	1081.05
9/17/2012		9033	9033	470	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	150 U	0.00E+00	61 U	0.00E+00	4.42E-02	1102.58
Pulse -off period September 17, 2012 to November 15, 2012																		
11/15/2012	Dup	9037	9037	420	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	280 U	0.00E+00	110 U	0.00E+00	4.80E-02	1102.78
11/15/2012		9037	9037	420	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	240 U	0.00E+00	94 U	0.00E+00	9.68E-02	-
12/14/2012		9439	9439	150	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	19 U	0.00E+00	7.5 U	0.00E+00	1.96E-03	1103.57
Pulse -off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.7 U	0.00E+00	0.00E+00	1103.57
4/11/2013		9876	9876	340	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	18 U	0.00E+00	7.1 U	0.00E+00	4.37E-03	1105.48
Pulse -off period April 11, 2013 to May 10, 2013																		
5/10/2013		9882	9882	340	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	3.40E-03	1105.50
7/15/2013		10907	10907	340	19	9.23E-05	1.2	6.72E-06	2.2	1.23E-05	1.1 U	0.00E+00	24	7.35E-05	4.9	1.86E-05	2.84E-03	1108.40
Pulse -off period July 15, 2013 to September 9, 2013																		
9/9/2013		10914	10914	340	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	14	4.29E-05	4.6 U	0.00E+00	4.89E-03	1108.44
11/18/2013		11992	11992	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	2.28E-03	1110.90

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT																		
Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	200	1.32E-03	1.2 U	0.00E+00	5.5	2.70E-05	1.2 U	0.00E+00	3.3	1.59E-05	9.6	4.62E-05	1.2 U	0.00E+00
3/14/2014		12980	12980	180	430	1.60E-03	2.6 U	0.00E+00	6.2	1.71E-05	2.6 U	0.00E+00	8.2	2.22E-05	18	4.87E-05	2.6 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	470	1.75E-03	1.1 U	0.00E+00	10	2.76E-05	1.1 U	0.00E+00	6.9	1.87E-05	22	5.95E-05	1.1 U	0.00E+00
7/23/2014		14627	14627	300	14	8.69E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.6	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	150	9.93E-04	1.2 U	0.00E+00	9	4.42E-05	1.2 U	0.00E+00	1.7	8.18E-06	15	7.21E-05	1.2 U	0.00E+00
11/14/2014		16008	16008	320	220	1.46E-03	0.96 U	0.00E+00	5	2.45E-05	0.96 U	0.00E+00	3.6	1.73E-05	8.9	4.28E-05	0.96 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	150	8.07E-04	1.1 U	0.00E+00	4.1	1.64E-05	1.1 U	0.00E+00	2.2	8.60E-06	7.4	2.89E-05	1.1 U	0.00E+00
3/13/2015		17178	17178	220	190	8.65E-04	1.2 U	0.00E+00	4.9	1.65E-05	1.2 U	0.00E+00	3.1	1.03E-05	5.5	1.82E-05	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	180	1.19E-03	2.6 U	0.00E+00	4.3	2.11E-05	2.6 U	0.00E+00	2.8	1.35E-05	5.2	2.50E-05	2.6 U	0.00E+00
7/16/2015		18436	18436	310	270	1.73E-03	1.2 U	0.00E+00	7.7	3.66E-05	1.2 U	0.00E+00	4	1.86E-05	13	6.06E-05	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	200	1.24E-03	1.1 U	0.00E+00	6.3	2.90E-05	1.1 U	0.00E+00	2.1	9.47E-06	11	4.96E-05	1.1 U	0.00E+00
11/20/2015		19832	19832	530	170	1.86E-03	1.2 U	0.00E+00	7	5.69E-05	1.2 U	0.00E+00	2.6	2.07E-05	12	9.56E-05	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	39	3.07E-04	1.1 U	0.00E+00	1.7	9.91E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	1.94E-05	1.1 U	0.00E+00
3/18/2016		21088	21088	420	88	7.64E-04	1.1 U	0.00E+00	5	3.22E-05	1.1 U	0.00E+00	1.2	7.57E-06	6.8	4.29E-05	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	9.3	3.46E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	14	5.21E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.33E-06	1.1 U	0.00E+00
7/22/2016		22610	22610	230	33	1.57E-04	1.0 U	0.00E+00	1.9	6.70E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	1.21E-05	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	33	1.23E-04	1.0 U	0.00E+00	1.9	5.25E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	9.47E-06	1.0 U	0.00E+00
11/28/2016		24162	24162	100	17	3.52E-05	1.1 U	0.00E+00	1.7	2.61E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.9	2.86E-06	1.1 U	0.00E+00

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to March 14, 2014																				
1/15/2014		11997	11997	320	51	4.20E-04	11	7.17E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		12980	12980	180	7.8	3.61E-05	14	5.13E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		12986	12986	180	38	1.76E-04	17	6.23E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		14627	14627	300	15	1.16E-04	2.4	1.47E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14634	14628	320	200	1.65E-03	39	2.54E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	2	7.75E-06
11/14/2014		16008	16008	320	69	5.68E-04	12	7.82E-05	0.96 U	0.00E+00	9.6 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	3.8 U	0.00E+00	0.96 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16015	16015	260	50	3.34E-04	11	5.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17178	17178	220	27	1.53E-04	6.9	3.09E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17186	17186	320	45	3.70E-04	9.8	6.39E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
7/16/2015		18436	18436	310	130	1.04E-03	27	1.71E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18439	18439	300	200	1.54E-03	36	2.20E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		19832	19832	530	120	1.64E-03	23	2.48E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19841	19841	380	62	6.06E-04	11	8.51E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21088	21088	420	52	5.62E-04	11	9.41E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21092	21092	180	14	6.48E-05	2.4	8.80E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	21	9.72E-05	3.9	1.43E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		22610	22610	230	39	2.31E-04	7.5	3.51E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016*		22611	22611	180	39	1.80E-04	7.5	2.75E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
11/28/2016		24162	24162	100	14	3.60E-05	2.8	5.70E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.90E-03	1110.91
3/14/2014		12980	12980	180	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.78E-03	1112.65
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	3.9	1.00E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.10E-03	1112.67
7/23/2014		14627	14627	300	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.17E-04	1113.02
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	21	6.05E-05	4.9 U	0.00E+00	3.09E-03	1113.03
11/14/2014		16008	16008	320	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	9.6 U	0.00E+00	3.8 U	0.00E+00	2.19E-03	1116.04
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.25E-03	1116.05
3/13/2015		17178	17178	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.09E-03	1117.32
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.68E-03	1117.34
7/16/2015		18436	18436	310	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.05E-03	1121.16
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.09E-03	1121.16
11/20/2015		19832	19832	530	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	3.92E-03	1126.63
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.03E-03	1126.63
3/18/2016		21088	21088	420	2.7	1.62E-05	1.1 U	0.00E+00	9.7	6.71E-05	4.1	2.83E-05	11 U	0.00E+00	4.5 U	0.00E+00	1.61E-03	1128.65
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.08E-04	1128.65
5/19/2016	Dup	21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.68E-04	-
7/22/2016		22610	22610	230	1.2	3.94E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	3.73E-05	4.2 U	0.00E+00	4.83E-04	1129.38
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	1.2	3.09E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	2.92E-05	4.2 U	0.00E+00	3.78E-04	1129.38
11/28/2016		24162	24162	100	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	8.23E-05	1129.51

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT																		
Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 28, 2016 to January 24, 2017																		
1/24/2017		24166	24166	220	19	8.65E-05	1.1 U	0.00E+00	1.5	5.06E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06	1.1 U	0.00E+00
1/24/2017	Dup	24166	24166	220	22	1.00E-04	1.1 U	0.00E+00	1.7	5.74E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06	1.1 U	0.00E+00
3/23/2017		25427	25427	190	55	2.16E-04	1.2 U	0.00E+00	4.1	1.20E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.4	9.71E-06	1.2 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																		
5/15/2017		25452	25452	180	25	9.31E-05	1.2 U	0.00E+00	1.6	4.42E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	2	5.41E-06	1.2 U	0.00E+00
7/20/2017		26992	26992	410	100	8.48E-04	2.2 U	0.00E+00	5.6	3.52E-05	2.2 U	0.00E+00	2.2 U	0.00E+00	9.4	5.79E-05	2.2 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																		
9/14/2017		27001	27001	420	120	1.04E-03	1.0 U	0.00E+00	5	3.22E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	6.4	4.04E-05	1.0 U	0.00E+00
9/14/2017	Dup	-	-	-	120	-	1.0 U	-	5.1	-	1.0 U	-	1.0 U	-	6.6	-	1.0 U	-
11/17/2017		28486	28486	480	78	7.74E-04	1.1 U	0.00E+00	4.3	3.17E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	4.9	3.54E-05	1.1 U	0.00E+00
Pulse -off period November 17, 2017 to January 22, 2018																		
1/22/2018		28489	28489	460	63	5.99E-04	1.2 U	0.00E+00	2.5	1.76E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.0	2.07E-05	1.3	8.99E-06
3/23/2018		29726	29726	440	53	4.82E-04	1.3 U	0.00E+00	5.5	3.71E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.8	2.51E-05	1.3 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																		
5/21/2018		29731	29731	410	39	3.31E-04	1.3 U	0.00E+00	3	1.89E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.5	1.54E-05	1.3 U	0.00E+00
5/21/2018	Dup	-	-	-	40	-	1.2 U	-	3.2	-	1.2 U	-	1.2 U	-	2.4	-	1.2 U	-
7/26/2018		30783	30783	410	55	4.66E-04	1.3 U	0.00E+00	5.6	3.52E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	8.6	5.30E-05	1.3 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																		
9/17/2018		30791	30791	360	95	7.07E-04	1.3 U	0.00E+00	5.5	3.04E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	6.7	3.63E-05	1.3 U	0.00E+00
11/19/2018		32280	32280	410	25	2.12E-04	1.3 U	0.00E+00	2.8	1.76E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.3	2.03E-05	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																		
1/21/2019		32284	32284	280	16	9.27E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		33265	33265	300	32	1.99E-04	1.3 U	0.00E+00	3.6	1.66E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	4.0	1.80E-05	1.3 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																		
5/24/2019		33269	33269	260	35	1.88E-04	1.4 U	0.00E+00	2.7	1.08E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	2.9	1.13E-05	1.4 U	0.00E+00
7/29/2019		34775	34775	200	13	5.38E-05	1.4 U	0.00E+00	1.5	4.60E-06	1.4 U	0.00E+00	1.4 U	0.00E+00	2.1	6.31E-06	1.4 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																		
9/27/2019		34779	34779	100	20	4.14E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		36495	36495	180	9.3	3.46E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period December 9, 2019 to January 21, 2020																		
1/21/2020		36523	36523	260	8.2	4.41E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		37827	37827	100	24	4.96E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse-off period	November	28, 2016 to January 24, 2017																		
1/24/2017	Dup	24166	24166	220	18	1.02E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
1/24/2017		24166	24166	220	19	1.07E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		25427	25427	190	20	9.77E-05	4.5	1.74E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period	March 23, 2017 to May 15, 2017																			
5/15/2017		25452	25452	180	21	9.72E-05	4.1	1.50E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		26992	26992	410	150	1.58E-03	28	2.34E-04	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	8.6 U	0.00E+00	2.2 U	0.00E+00
Pulse-off period	July 20, 2017 to September 14, 2017																			
9/14/2017	Dup	27001	27001	420	240	2.59E-03	46	3.94E-04	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00
9/14/2017		-	-	-	240	-	46	-	1.0 U	-	11 U	-	1.0 U	-	1.0 U	-	4.5 U	-	1.0 U	-
11/17/2017		28486	28486	480	69	8.52E-04	16	1.56E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period	November 17, 2017 to January 22, 2018																			
1/22/2018		28489	28489	460	45	5.32E-04	9.9	9.28E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		29726	29726	440	39	4.41E-04	8.3	7.44E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period	March 23, 2018 to May 21, 2018																			
5/21/2018	Dup	29731	29731	410	45	4.74E-04	9	7.52E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
5/21/2018		-	-	-	47	-	9.3	-	1.2 U	-	12 U	-	1.2 U	-	1.2 U	-	4.9 U	-	1.2 U	-
7/26/2018		30783	30783	410	200	2.11E-03	43	3.59E-04	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period	July 26, 2018 to September 17, 2018																			
9/17/2018		30791	30791	360	220	2.04E-03	47	3.45E-04	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.1 U	0.00E+00	1.3 U	0.00E+00
11/19/2018		32280	32280	410	41	4.32E-04	8.7	7.27E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period	November 19, 2018 to January 21, 2019																			
1/21/2019		32284	32284	280	23	1.66E-04	4.6	2.62E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
3/21/2019		33265	33265	300	20	1.54E-04	4.8	2.93E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period	March 21, 2019 to May 24, 2019																			
5/24/2019		33269	33269	260	27	1.80E-04	6.2	3.28E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00
7/29/2019		34775	34775	200	24	1.23E-04	4.3	1.75E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00
Pulse-off period	July 29, 2019 to September 27, 2019																			
9/27/2019		34779	34779	100	42	1.08E-04	7.3	1.49E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.7 U	0.00E+00	1.4 U	0.00E+00
12/9/2019		36495	36495	180	8.1	3.75E-05	1.6	5.87E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period	December 9, 2019 to January 21, 2020																			
1/21/2020		36523	36523	260	6.5	4.35E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	14	4.41E-05
3/20/2020		37827	37827	100	6.4	1.65E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.8 U	0.00E+00	1.4 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCEM standard cubic feet per minute

| Indicates estimated value

³ Indicates estimated value.
The analyte was detected in the method, field and/or

B The analyte was detected in the method, held under trip blank.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period November 28, 2016 to January 24, 2017																		
1/24/2017		24166	24166	220	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.16E-04	1129.51
1/24/2017	Dup	24166	24166	220	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.36E-04	-
3/23/2017		25427	25427	190	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.53E-04	1129.95
Pulse-off period March 23, 2017 to May 15, 2017																		
5/15/2017		25452	25452	180	2.1	5.40E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.21E-04	1129.96
7/20/2017		26992	26992	410	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.6 U	0.00E+00	2.76E-03	1134.20
Pulse-off period July 20, 2017 to September 14, 2017																		
9/14/2017		27001	27001	420	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.1 U	0.00E+00	4.10E-03	1134.24
9/14/2017	Dup	-	-	-	1.0 U	-	1.0 U	-	1.0 U	-	1.0 U	-	11 U	-	4.5 U	-	-	-
11/17/2017		28486	28486	480	1.6	1.10E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.86E-03	1137.00
Pulse-off period November 17, 2017 to January 22, 2018																		
1/22/2018		28489	28489	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	1.27E-03	1137.01
3/23/2018		29726	29726	440	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.06E-03	1138.32
Pulse-off period March 23, 2018 to May 21, 2018																		
5/21/2018		29731	29731	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	9.15E-04	1138.32
5/21/2018	Dup	-	-	-	1.2	-	1.2 U	-	1.2 U	-	1.2 U	-	12 U	-	4.9 U	-	-	-
7/26/2018		30783	30783	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	3.02E-03	1141.50
Pulse-off period July 26, 2018 to September 17, 2018																		
9/17/2018		30791	30791	360	1.4	7.20E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.1 U	0.00E+00	3.16E-03	1141.53
11/19/2018		32280	32280	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	7.55E-04	1142.65
Pulse-off period November 19, 2018 to January 21, 2019																		
1/21/2019		32284	32284	280	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.84E-04	1142.65
3/21/2019		33265	33265	300	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	4.17E-04	1143.06
Pulse-off period March 21, 2019 to May 24, 2019																		
5/24/2019		33269	33269	260	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	4.24E-04	1143.06
7/29/2019		34775	34775	200	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	46	8.28E-05	5.8 U	0.00E+00	2.88E-04	1143.50
Pulse-off period July 29, 2019 to September 27, 2019																		
9/27/2019		34779	34779	100	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.7 U	0.00E+00	1.64E-04	1143.50
12/9/2019		36495	36495	180	1.2 U	0.00E+00	1.2 U	0.00E+00	2.8	8.30E-06	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	8.63E-05	1143.65
Pulse-off period December 9, 2019 to January 21, 2020																		
1/21/2020		36523	36523	260	50	1.86E-04	9.2	3.94E-05	20	8.56E-05	7.4	3.17E-05	15	3.51E-05	5.6 U	0.00E+00	5.09E-04	1143.66
3/20/2020		37827	37827	100	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.8 U	0.00E+00	6.61E-05	1143.75

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011	Dup	218	218	360	28000	2.08E-01	100 U	0.00E+00	2400	1.33E-02	100 U	0.00E+00	740	4.00E-03	10000	5.41E-02	100 U	0.00E+00	5900	5.46E-02
3/18/2011		362	362	360	13000	9.68E-02	52 U	0.00E+00	1100	6.08E-03	52 U	0.00E+00	280	1.52E-03	4800	2.60E-02	52 U	0.00E+00	6800	6.29E-02
3/25/2011		459	459	360	8900	6.63E-02	30 U	0.00E+00	650	3.59E-03	30 U	0.00E+00	200	1.08E-03	2600	1.41E-02	30 U	0.00E+00	5400	5.00E-02
3/30/2011		553	553	360	4600	3.43E-02	13 U	0.00E+00	310	1.71E-03	13 U	0.00E+00	100	5.41E-04	1300	7.03E-03	13 U	0.00E+00	4000	3.70E-02
4/8/2011		759	759	360	4600	3.43E-02	20 U	0.00E+00	330	1.82E-03	20 U	0.00E+00	95	5.14E-04	1100	5.95E-03	20 U	0.00E+00	5700	5.28E-02
4/15/2011		920	920	360	4600	3.43E-02	20 U	0.00E+00	370	2.04E-03	20 U	0.00E+00	69	3.73E-04	980	5.30E-03	20 U	0.00E+00	4600	4.26E-02
5/19/2011		1681	1681	330	2800	1.91E-02	12 U	0.00E+00	250	1.27E-03	12 U	0.00E+00	34	1.69E-04	730	3.62E-03	12 U	0.00E+00	7800	6.62E-02
6/16/2011		2187	2187	300	1800	1.12E-02	7.8 U	0.00E+00	170	7.82E-04	7.8 U	0.00E+00	23 J	1.04E-04	520	2.34E-03	7.8 U	0.00E+00	2400	1.85E-02
7/15/2011		2745	2745	220	2400	1.09E-02	7.6 U	0.00E+00	180	6.08E-04	7.6 U	0.00E+00	27	8.93E-05	840	2.78E-03	7.6 U	0.00E+00	2700	1.53E-02
8/22/2011		3129	3129	260	1700	9.14E-03	5.0 U	0.00E+00	150	5.98E-04	5.0 U	0.00E+00	21	8.21E-05	690	2.70E-03	5.0 U	0.00E+00	2000	1.34E-02
9/15/2011		3626	3626	220	1400	6.37E-03	4.5 U	0.00E+00	69	2.33E-04	4.5 U	0.00E+00	22	7.27E-05	380	1.26E-03	4.5 U	0.00E+00	1100	6.22E-03
10/14/2011		4222	4222	220	980	4.46E-03	3.9 U	0.00E+00	57	1.92E-04	3.9 U	0.00E+00	19	6.28E-05	310	1.03E-03	3.9 U	0.00E+00	760	4.30E-03
11/21/2011		5015	5015	200	690	2.85E-03	3.2 U	0.00E+00	55	1.69E-04	3.2 U	0.00E+00	45	1.35E-04	290	8.72E-04	3.2 U	0.00E+00	380	1.95E-03
11/21/2011		5015	5015	200	700	2.90E-03	3.1 U	0.00E+00	57	1.75E-04	3.1 U	0.00E+00	59	1.77E-04	300	9.02E-04	3.1 U	0.00E+00	390	2.01E-03
12/14/2011		5339	5339	200	890	3.68E-03	3.2 U	0.00E+00	62	1.90E-04	3.2 U	0.00E+00	64	1.92E-04	270	8.12E-04	3.2 U	0.00E+00	350	1.80E-03
1/19/2012		5958	5958	0	540	0.00E+00	2.8 U	0.00E+00	17	0.00E+00	2.8 U	0.00E+00	9.9	0.00E+00	69	0.00E+00	2.8 U	0.00E+00	78	0.00E+00
2/15/2012		6364	6364	0	990	0.00E+00	4.1 U	0.00E+00	24	0.00E+00	4.1 U	0.00E+00	100	0.00E+00	230	0.00E+00	4.1 U	0.00E+00	150	0.00E+00
3/15/2012		6942	6942	0	1100	0.00E+00	3.8 U	0.00E+00	43	0.00E+00	3.8 U	0.00E+00	20	0.00E+00	220	0.00E+00	3.8 U	0.00E+00	140	0.00E+00
4/19/2012		7625	7625	80	650	1.08E-03	2.4 U	0.00E+00	28	3.44E-05	2.4 U	0.00E+00	8.1	9.74E-06	130	1.56E-04	2.4 U	0.00E+00	100	2.06E-04
5/16/2012		8138	8138	200	650	2.69E-03	2.0 U	0.00E+00	28	8.59E-05	2.0 U	0.00E+00	8.9	2.68E-05	110	3.31E-04	2.0 U	0.00E+00	130	6.68E-04
Pulse-off period June 1, 2012 to August 14, 2012																				
8/14/2012		8541	8541	360	710	3.23E-03	2.5 U	0.00E+00	44	1.49E-04	2.5 U	0.00E+00	11	3.64E-05	110	3.64E-04	2.5 U	0.00E+00	540	3.05E-03
9/17/2012		9029	9029	360	2000	8.27E-03	8.0 U	0.00E+00	29	8.90E-05	8.0 U	0.00E+00	19	5.71E-05	42	1.26E-04	8.0 U	0.00E+00	190	9.77E-04
Pulse-off period September 17, 2012 to November 15, 2012																				
11/15/2012		9033	9033	220	1200	5.46E-03	4.4 U	0.00E+00	19	6.41E-05	4.4 U	0.00E+00	33	1.09E-04	8	2.65E-05	4.4 U	0.00E+00	55	3.11E-04
12/14/2012		9436	9436	200	1200	4.96E-03	4.8 U	0.00E+00	35	1.07E-04	4.8 U	0.00E+00	16	4.81E-05	37	1.11E-04	4.8 U	0.00E+00	61	3.14E-04
Pulse-off period December 14, 2012 to February 26, 2013																				
2/26/2013		9511	9511	440	70	6.37E-04	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00
4/11/2013		9952	9952	420	1600	1.39E-02	8	6.95E-05	160	1.03E-03	5.1 U	0.00E+00	20	1.26E-04	88	5.56E-04	5.1 U	0.00E+00	320	3.46E-03
Pulse-off period April 11, 2013 to May 10, 2013																				
5/10/2013		9958	9958	420																

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011	Dup	218	218	360	1400	1.03E-02	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	350	1.80E-03		
3/18/2011		362	362	360	1100	8.07E-03	52 U	0.00E+00	52 U	0.00E+00	52 U	0.00E+00	210 U	0.00E+00	52 U	0.00E+00	120 JB	6.17E-04		
3/25/2011		459	459	360	760	5.57E-03	30 U	0.00E+00	33	1.56E-04	30 U	0.00E+00	30 U	0.00E+00	120 U	0.00E+00	30 U	0.00E+00	73	3.75E-04
3/30/2011		553	553	360	420	3.08E-03	13 U	0.00E+00	13 U	0.00E+00	13 U	0.00E+00	20 U	0.00E+00	51 U	0.00E+00	13 U	0.00E+00	37	1.90E-04
4/8/2011		759	759	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	57	2.93E-04		
4/15/2011		920	920	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	85	4.37E-04		
5/19/2011		1681	1681	330	360	2.42E-03	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	120	5.66E-04		
6/16/2011		2187	2187	300	180	1.10E-03	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	12	4.36E-05	7.8 U	0.00E+00		
7/15/2011		2745	2745	220	280	1.25E-03	7.6 U	0.00E+00	20	5.79E-05	7.6 U	0.00E+00	7.6 U	0.00E+00	30 U	0.00E+00	7.6 U	0.00E+00	49	1.54E-04
8/22/2011		3129	3129	260	160	8.47E-04	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	20 U	0.00E+00	7.6	2.39E-05	5.0 U	0.00E+00		
9/15/2011		3626	3626	220	83	3.72E-04	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	5	1.33E-05	4.5 U	0.00E+00
10/14/2011		4222	4222	220	50	2.24E-04	3.9 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00	16 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00
11/21/2011		5015	5015	200	27	1.10E-04	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00
11/21/2011		5015	5015	200	28	1.14E-04	3.1 U	0.00E+00	31 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00	12 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00
12/14/2011		5339	5339	200	24	9.78E-05	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00
1/19/2012		5958	5958	0	10	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00
2/15/2012		6364	6364	0	19	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00
3/15/2012		6942	6942	0	25	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00
4/19/2012		7625	7625	80	19	3.10E-05	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
5/16/2012		8138	8138	200	24	9.78E-05	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012	Dup	8541	8541	360	64	2.87E-04	2.5 U	0.00E+00	25 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00	9.9 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00
9/17/2012		9029	9029	360	71	2.89E-04	8.0 U	0.00E+00	80 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00	32 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012	Dup	9033	9033	220	39	1.75E-04	4.4 U	0.00E+00	44 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00	18 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00
12/14/2012		9436	9436	200	60	2.44E-04	4.8 U	0.00E+00	48 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	19 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013	Dup	9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	27 U	0.00E+00	12	6.39E-05	6.8 U	0.00E+00
4/11/2013		9952	9952	420	110	9.41E-04	5.1 U	0.00E+00	51 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013	Dup	9958	9958	420	79	6.76E-04	5.4 U	0.00E+0												

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011	Dup	218	218	360	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	420 U	0.00E+00	3.47E-01	75.54
3/18/2011		362	362	360	52 U	0.00E+00	59	3.50E-04	110	6.52E-04	210 U	0.00E+00	210 U	0.00E+00	2.03E-01	104.77
3/25/2011		459	459	360	30 U	0.00E+00	30 U	0.00E+00	47	2.79E-04	130	4.21E-04	120 U	0.00E+00	1.42E-01	118.53
3/30/2011		553	553	360	16	9.48E-05	23	1.36E-04	46	2.73E-04	99	3.21E-04	51 U	0.00E+00	8.47E-02	126.48
4/8/2011		759	759	360	38	2.25E-04	84	4.98E-04	120	7.11E-04	81 U	0.00E+00	81 U	0.00E+00	1.01E-01	147.32
4/15/2011		920	920	360	45	2.67E-04	160	9.48E-04	140	8.30E-04	180 J,B	5.83E-04	81 U	0.00E+00	9.17E-02	162.08
5/19/2011		1681	1681	330	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	360	1.07E-03	47 U	0.00E+00	9.44E-02	233.92
6/16/2011		2187	2187	300	15	7.41E-05	54	2.67E-04	64	3.16E-04	69 J,B	1.86E-04	31 U	0.00E+00	3.49E-02	251.58
7/15/2011		2745	2745	220	13	4.71E-05	120	4.35E-04	140	5.07E-04	94	1.86E-04	30 U	0.00E+00	3.23E-02	269.61
8/22/2011		3129	3129	260	5.9	2.52E-05	19	8.13E-05	29	1.24E-04	62 J,B	1.45E-04	20 U	0.00E+00	2.71E-02	280.03
9/15/2011		3626	3626	220	4.5 U	0.00E+00	14	5.07E-05	17	6.16E-05	49	9.71E-05	18 U	0.00E+00	1.47E-02	287.36
10/14/2011		4222	4222	220	3.9 U	0.00E+00	7.1	2.57E-05	10	3.62E-05	16 U	0.00E+00	16 U	0.00E+00	1.03E-02	293.51
11/21/2011		5015	5015	200	3.2 U	0.00E+00	4.5	1.48E-05	6.1	2.01E-05	36	6.48E-05	13 U	0.00E+00	6.19E-03	298.43
11/21/2011		5015	5015	200	3.1 U	0.00E+00	4.2	1.38E-05	6.2	2.04E-05	31 U	0.00E+00	12 U	0.00E+00	6.30E-03	298.51
12/14/2011		5339	5339	200	3.2 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	32 UJ	0.00E+00	13 U	0.00E+00	6.77E-03	300.62
1/19/2012		5958	5958	0	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	0.00E+00	300.62
2/15/2012		6364	6364	0	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	0.00E+00	300.62
3/15/2012		6942	6942	0	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	0.00E+00	300.62
4/19/2012		7625	7625	80	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	9.4 U	0.00E+00	1.51E-03	301.65
5/16/2012		8138	8138	200	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	7.9 U	0.00E+00	3.90E-03	303.65
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		8541	8541	360	2.5 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00	25 U	0.00E+00	9.9 U	0.00E+00	7.12E-03	306.52
9/17/2012		9029	9029	360	8.0 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00	80 U	0.00E+00	32 U	0.00E+00	9.81E-03	311.31
Pulse -off period September 17, 2012 to November 15, 2012																
11/15/2012		9033	9033	220	4.4 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00	44 U	0.00E+00	18 U	0.00E+00	6.15E-03	311.34
12/14/2012		9436	9436	200	4.8 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	48 U	0.00E+00	19 U	0.00E+00	5.79E-03	313.67
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013		9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	27 U	0.00E+00	7.01E-04	313.72
4/11/2013		9952	9952	420	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	51 U	0.00E+00	20 U	0.00E+00	2.01E-02	322.58
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013		9958	9958	420	5.4 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00	54 U	0.00E+00	22 U	0.00E+00	1.44E-02	322.66
7/15/2013		10984	10984	360	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	1.65E-02	339.59
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013		10991	10991	380	4 U	0.00E+00	4 U	0.00E+00	4 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	8.81E-03	339.65
11/18/2013		12069	12069	380	7.6 U	0.00E+00	7.6 U	0.00E+00	7.6 U	0.00E+00	76 U	0.00E+00	31 U	0.00E+00	1.58E-02	356.69

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		12074	12074	380	950	7.47E-03	3.5 U	0.00E+00	24	1.40E-04	3.5 U	0.00E+00	10	5.71E-05	23	1.31E-04	3.5 U	0.00E+00	82	8.01E-04
3/14/2014		13057	13057	380	1400	1.10E-02	7.8 U	0.00E+00	32	1.87E-04	7.8 U	0.00E+00	24	1.37E-04	88	5.03E-04	7.8 U	0.00E+00	30	2.93E-04
Pulse -off period March 14, 2014 to May 15, 2014																				
5/1/2014		13063	13063	300	1000	6.20E-03	3.0 U	0.00E+00	20	9.21E-05	3.0 U	0.00E+00	14	6.31E-05	65	2.93E-04	3.0 U	0.00E+00	71	5.48E-04
7/23/2014		14714	14714	100	670	1.39E-03	2.2 U	0.00E+00	19	2.92E-05	2.2 U	0.00E+00	9.6	1.44E-05	12	1.80E-05	2.2 U	0.00E+00	47	1.21E-04
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14721	14715	120	470	1.17E-03	2.3 U	0.00E+00	10	1.84E-05	2.3 U	0.00E+00	4.8	8.66E-06	6.9	1.24E-05	2.3 U	0.00E+00	79	2.44E-04
11/14/2014		16095	16095	290	660	3.96E-03	2.4 U	0.00E+00	15	6.67E-05	2.4 U	0.00E+00	8.5	3.70E-05	19	8.28E-05	2.4 U	0.00E+00	32	2.39E-04
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16102	16102	180	360	1.34E-03	1.1 U	0.00E+00	4.6	1.27E-05	1.1 U	0.00E+00	4.0	1.08E-05	7.2	1.95E-05	1.1 U	0.00E+00	12	5.55E-05
3/13/2015		17322	17322	260	660	3.55E-03	2.4 U	0.00E+00	22	8.78E-05	2.4 U	0.00E+00	8.0	3.13E-05	16	6.25E-05	2.4 U	0.00E+00	29	1.94E-04
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17329	17329	260	360	1.94E-03	1.1 U	0.00E+00	7.3	2.91E-05	1.1 U	0.00E+00	2.5	9.77E-06	5.9	2.31E-05	1.1 U	0.00E+00	31	2.07E-04
7/16/2015		18578	18578	180	260	9.68E-04	1.2 U	0.00E+00	22	6.08E-05	1.2 U	0.00E+00	3.5	9.47E-06	12	3.25E-05	1.2 U	0.00E+00	54	2.50E-04
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18580	18580	160	150	4.96E-04	1.2 U	0.00E+00	4.2	1.03E-05	1.2 U	0.00E+00	1.2	2.89E-06	2.4	5.77E-06	1.2 U	0.00E+00	47	1.93E-04
11/20/2015		19973	19973	230	320	1.52E-03	1.2 U	0.00E+00	26	9.17E-05	1.2 U	0.00E+00	5.5	1.90E-05	13	4.49E-05	1.2 U	0.00E+00	50	2.96E-04
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19982	19982	180	78	2.90E-04	1.1 U	0.00E+00	1.9	5.25E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.52E-06	1.1 U	0.00E+00	10	4.63E-05
3/18/2016		21229	21229	260	340	1.83E-03	1.1 U	0.00E+00	21	8.38E-05	1.1 U	0.00E+00	5.4	2.11E-05	11	4.30E-05	1.1 U	0.00E+00	30	2.01E-04
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21233	21233	140	100	2.90E-04	1.2 U	0.00E+00	2.9	6.23E-06	1.2 U	0.00E+00	1.4	2.95E-06	2.2	4.63E-06	1.2 U	0.00E+00	9.3	3.35E-05
7/22/2016		22751	22751	180	340	1.27E-03	1.0 U	0.00E+00	13	3.59E-05	1.0 U	0.00E+00	5.2	1.41E-05	8.5	2.30E-05	1.0 U	0.00E+00	40	1.85E-04
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		22752	22752	180	160	5.96E-04	1.2 U	0.00E+00	3.4	9.39E-06	1.2 U	0.00E+00	1.8	4.87E-06	2.6	7.03E-06	1.2 U	0.00E+00	41	1.90E-04
11/28/2016		24305	24305	220	330	1.50E-03	1.2 U	0.00E+00	10	3.38E-05	1.2 U	0.00E+00	5.1	1.69E-05	8.3	2.74E-05	1.2 U	0.00E+00	13	7.35E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		24309	24309	190	52	2.04E-04	1.2 U	0.00E+00	1.4	4.08E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	440	8.19E-04	2.4 U	0.00E+00	8.6	1.19E-05	2.4 U	0.00E+00	3.7	5.00E-06	9	1.22E-05	2.4 U	0.00E+00	9	2.08E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		25597	25597	90	190	3.54E-04	1.2 U	0.00E+00	2.1	2.90E-06	1.2 U	0.00E+00	1.6	2.16E-06	2.9	3.92E-06	1.2 U	0.00E+00	4.7	1.09E-05
7/20/2017		27137	27137	350	240	1.74E-03	1.2 U	0.00E+00	7.8	4.19E-05	1.2 U	0.00E+00	2.3	1.21E-05	4.2	2.21E-05	1.2 U	0.00E+00	23	2.07E-04
Pulse -off period July 20, 2017 to September 																				

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		12074	12074	380	37	2.86E-04	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00
3/14/2014		13057	13057	380	41	3.17E-04	7.8 U	0.00E+00	78 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		13063	13063	300	33	2.02E-04	3.0 U	0.00E+00	30 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
7/23/2014		14714	14714	100	14	2.85E-05	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14721	14715	120	22	5.38E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.4 U	0.00E+00	6.4	9.30E-06	2.3 U	0.00E+00
11/14/2014		16095	16095	290	11	6.50E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.7 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16102	16102	180	4.9	1.80E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17322	17322	260	12	6.36E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17329	17329	260	8.2	4.34E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.4	5.20E-06
7/16/2015		18578	18578	180	14	5.13E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18580	18580	160	11	3.59E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/20/2015		19973	19973	230	11	5.15E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19982	19982	180	2	7.33E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21229	21229	260	8.5	4.50E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21233	21233	140	2.1	5.99E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		22751	22751	180	9.3	3.41E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		22752	22752	180	10	3.67E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		24305	24305	220	4.7	2.11E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	4.6	8.43E-06	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E				

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period November 18, 2013 to January 15, 2014																
1/15/2014		12074	12074	380	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	35 U	0.00E+00	14 U	0.00E+00	8.88E-03	356.73
3/14/2014		13057	13057	380	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	78 U	0.00E+00	31 U	0.00E+00	1.24E-02	368.96
Pulse-off period March 14, 2014 to May 15, 2014																
5/15/2014		13063	13063	300	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	30 U	0.00E+00	12 U	0.00E+00	7.40E-03	369.01
7/23/2014		14714	14714	100	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.60E-03	371.61
Pulse-off period July 23, 2014 to September 16, 2014																
9/16/2014		14721	14715	120	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	32	3.46E-05	9.4 U	0.00E+00	1.55E-03	371.61
11/14/2014		16095	16095	290	2.4 U	0.00E+00	2.4 U	0.00E+00	2.8	1.34E-05	24 U	0.00E+00	9.7 U	0.00E+00	4.46E-03	377.77
Pulse-off period November 14, 2014 to January 9, 2015																
1/9/2015		16102	16102	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.46E-03	377.78
3/13/2015		17322	17322	260	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	3.99E-03	382.64
Pulse-off period March 13, 2015 to May 15, 2015																
5/15/2015		17329	17329	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	382.66
7/16/2015		18578	18578	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.37E-03	384.37
Pulse-off period July 16, 2015 to September 22, 2015																
9/22/2015		18580	18580	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.45E-04	384.37
11/20/2015		19973	19973	230	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.03E-03	387.19
Pulse-off period November 20, 2015 to January 19, 2016																
1/19/2016		19982	19982	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.53E-04	387.20
3/18/2016		21229	21229	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.22E-03	389.97
Pulse-off period March 18, 2016 to May 19, 2016																
5/19/2016		21233	21233	140	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.43E-04	389.97
7/22/2016		22751	22751	180	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 J	0.00E+00	1.56E-03	392.33
Pulse-off period July 22, 2016 to September 20, 2016																
9/20/2016		22752	22752	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	8.43E-04	392.33
11/28/2016		24305	24305	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.67E-03	394.93
Pulse-off period November 28, 2016 to January 24, 2017																
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.08E-04	394.94
3/23/2017		25572	25572	90	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	8.77E-04	396.04
Pulse-off period March 23, 2017 to May 15, 2017																
5/15/2017		25597	25597	90	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.80E-04	396.05
7/20/2017		27137	27137	350	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.07E-03	399.24
Pulse-off period July 20, 2017 to September 14, 2017																
9/14/2017		27146	27146	350	1.1 U	0.00E+00	1.1	6.34E-06	1.1 U	0.00E+00	12	3.78E-05	4.3 U	0.00E+00	2.28E-03	402.77
11/17/2017		28631	28631	480	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	2.78E-03	406.93

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		28634	28634	440	160	1.46E-03	1.2 U	0.00E+00	3.3	2.23E-05	1.2 U	0.00E+00	1.4	9.26E-06	2.4	1.59E-05	1.2 U	0.00E+00	4.2	4.75E-05
3/23/2018		29870	29870	460	170	1.62E-03	1.2 U	0.00E+00	7.9	5.58E-05	1.2 U	0.00E+00	2.1	1.45E-05	4.2	2.90E-05	1.2 U	0.00E+00	9.0	1.06E-04
Pulse -off period March 23, 2018 to May 21, 2018																				
5/2/2018		29870	29870	420	120	1.04E-03	1.2 U	0.00E+00	3.7	2.38E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	2.6	1.64E-05	1.2 U	0.00E+00	7.2	7.77E-05
7/26/2018		31423	31423	420	150	1.30E-03	1.2 U	0.00E+00	10	6.44E-05	1.2 U	0.00E+00	1.8	1.14E-05	3	1.89E-05	1.2 U	0.00E+00	34	3.67E-04
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		31431	31431	420	140	1.22E-03	1.2 U	0.00E+00	4.6	2.96E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	2.3	1.45E-05	1.2 U	0.00E+00	25	2.70E-04
11/19/2018		32920	32920	420	99	8.60E-04	1.3 U	0.00E+00	7.4	4.77E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.7	2.34E-05	1.3 U	0.00E+00	12	1.30E-04
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		32944	32944	320	53	3.51E-04	1.3 U	0.00E+00	1.7	8.35E-06	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	3.9	3.21E-05
3/21/2019		33985	33985	220	75	3.41E-04	1.6 U	0.00E+00	6.8	2.30E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	2.2	7.28E-06	1.6 U	0.00E+00	6.6	3.73E-05
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		33989	33989	250	86	4.45E-04	1.5 U	0.00E+00	3.4	1.30E-05	1.5 U	0.00E+00	1.5 U	0.00E+00	2.3	8.64E-06	1.7	6.39E-06	5.4	3.47E-05
7/29/2019		35359	35359	420	210	1.82E-03	1.4 U	0.00E+00	9.2	5.93E-05	1.4 U	0.00E+00	2.1	1.33E-05	5.7	3.60E-05	1.4 U	0.00E+00	16	1.73E-04
Pulse -off period July 29, 2019 to September 27, 2019																				
Blower was off-line during the fourth quarter 2019 for inspections and was replaced with a new blower in January 2020.																				
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		35360	35360	260	25	1.34E-04	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.6	1.07E-05
3/20/2020		36661	36661	180	230	8.56E-04	1.3 U	0.00E+00	7.1	1.96E-05	1.3 U	0.00E+00	1.5	4.06E-06	2.1	5.68E-06	1.3 U	0.00E+00	12	5.55E-05

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387 * 1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 17, 2017 to January 22, 2018																				
1/22/2018		28634	28634	440	2.2	1.97E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		29870	29870	460	2.7	2.53E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period March 23, 2018 to May 21, 2018																				
5/21/2018		29870	29870	420	2.4	2.05E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/26/2018		31423	31423	420	8.4	7.19E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 26, 2018 to September 17, 2018																				
9/17/2018		31431	31431	420	6.1	5.22E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	2.3	1.38E-05
11/19/2018		32920	32920	420	3.5	2.99E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period November 19, 2018 to January 21, 2019																				
1/21/2019		32944	32944	320	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
3/21/2019		33985	33985	220	2.2	9.86E-06	1.6 U	0.00E+00	16 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00
Pulse -off period March 21, 2019 to May 24, 2019																				
5/24/2019		33989	33989	250	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	5.9 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00
7/29/2019		35359	35359	420	3.8	3.25E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse -off period July 29, 2019 to September 27, 2019																				
Blower was off-line during the fourth quarter 2019 for inspections and maintenance.																				
Pulse -off period December 9, 2019 to January 21, 2020																				
1/21/2020		35360	35360	260	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
3/20/2020		36661	36661	180	3.2	1.17E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		28634	28634	440	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	29	1.15E-04	4.7 U	0.00E+00	1.69E-03	406.93
3/23/2018		29870	29870	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.85E-03	409.22
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		29870	29870	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	1.18E-03	409.22
7/26/2018		31423	31423	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.84E-03	412.07
Pulse -off period July 26, 2018 to September 17, 2018																
9/17/2018		31431	31431	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	14	5.29E-05	4.9 U	0.00E+00	1.65E-03	412.08
11/19/2018		32920	32920	420	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.3 U	0.00E+00	1.09E-03	413.71
Pulse -off period November 19, 2018 to January 21, 2019																
1/21/2019		32944	32944	320	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.4 U	0.00E+00	3.91E-04	413.72
3/21/2019		33985	33985	220	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	16 U	0.00E+00	6.4 U	0.00E+00	4.19E-04	414.15
Pulse -off period March 21, 2019 to May 24, 2019																
5/24/2019		33989	33989	250	1.5 U	0.00E+00	1.5 U	0.00E+00	1.5 U	0.00E+00	15 U	0.00E+00	5.9 U	0.00E+00	5.07E-04	414.15
7/29/2019		35359	35359	420	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	2.14E-03	417.08
Pulse -off period July 29, 2019 to September 27, 2019																
Blower was off-line during the fourth quarter 2019 for inspections and maintenance.																
Pulse -off period December 9, 2019 to January 21, 2020																
1/21/2020		35360	35360	260	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	1.45E-04	417.08
3/20/2020		36661	36661	180	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	15	2.43E-05	5.3 U	0.00E+00	9.77E-04	418.35

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Date	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	
12/3/2009		0			SYSTEM STARTUP										0.00	
12/10/2009		53	0.22	11.91												11.91
12/11/2009					59	0.25	15.05									26.97
12/14/2009								60	0.31	18.51						45.48
12/15/2009					68	0.16	16.48									46.91
12/16/2009								76	0.17	21.16						49.55
12/22/2009		124	0.05	15.23												52.86
12/29/2009					180	0.12	29.76									66.15
1/5/2010								236	0.13	41.78						86.77
1/13/2010					301	0.05	35.75									92.75
1/21/2010								361	0.05	48.37						99.35
1/27/2010					408	0.06	42.68									106.27
2/24/2010		631	0.01	20.06	631	0.04	51.44	631	0.04	58.76						130.26
3/15/2010		782	0.01	22.02	782	0.09	64.40	782	0.07	68.60						155.02
4/14/2010		935	0.02	25.22	935	0.04	70.89	935	0.11	84.81						180.92
5/13/2010		1165	0.01	27.75	1165	0.04	79.74	1165	0.03	91.21						198.69
6/21/2010		1477	0.01	30.20	1477	0.02	86.90	1477	0.02	96.92						214.02
7/21/2010		1686	0.01	32.52	1686	0.02	91.24	1686	0.02	101.05						224.81
8/23/2010		1928	0.00	32.52	1928	0.00	91.24	1928	0.00	101.05						224.81
9/23/2010		2174	0.01	34.49	2174	0.02	96.27	2174	0.02	106.49						237.25
10/22/2010		2406	0.01	35.86	2406	0.01	98.85	2406	0.01	109.27						243.98
11/15/2010		2598	0.01	36.96	2598	0.01	101.41	2598	0.01	112.05						250.42
12/22/2010		2777	0.01	38.22	2955	0.02	107.99	2777	0.02	115.44						261.65
1/24/2011		2975	0.01	39.47	3352	0.01	110.39	2975	0.01	117.20						267.06
2/25/2011		3167	0.01	40.53	3737	0.01	114.08	3167	0.00	118.15						272.76
3/11/2011											222	1.72	381.87	218	0.35	75.54
3/18/2011		3293	0.01	41.27	3988	0.00	114.57	3293	0.00	118.34	366	0.51	453.50	362	0.20	104.77
3/25/2011											463	0.29	482.07	459	0.14	118.53
3/30/2011											558	0.32	512.25	553	0.08	126.48
4/8/2011											764	0.29	572.27	759	0.10	147.32
4/15/2011		3460	0.01	42.15	4322	0.00	115.07	3460	0.00	118.47	924	0.24	610.05	920	0.09	162.08
5/19/2011		3665	0.00	42.87	4732	0.00	115.31	3665	0.00	118.53	1685	0.16	730.28	1681	0.09	233.92
6/16/2011		3830	0.00	43.39	5062	0.00	115.55	3830	0.00	118.81	2191	0.11	753.86	2187	0.03	251.58
7/15/2011		4472	0.00	44.96	4472	0.00	115.18	4472	0.00	119.39	2750	0.08	830.85	2745	0.03	269.61
8/22/2011		4775	0.00	45.59	4775	0.00	115.40	4775	0.01	121.30	3133	0.10	868.97	3129	0.03	280.03
9/15/2011		4968	0.00	45.93	4968	0.00	115.51	4968	0.00	121.91	3630	0.08	906.88	3626	0.01	287.36
10/14/2011		5199	0.00	46.20	5199	0.00	115.57	5199	0.00	122.54	4226	0.05	935.35	4222	0.01	293.51
11/21/2011		5503	0.00	46.43	5503	0.00	115.62	5503	0.00	123.00	5019	0.04	966.50	5015	0.01	298.43
12/14/2011		5670	0.00	46.53	5670	0.00	115.65	5670	0.00	123.67	5343	0.03	975.34	5339	0.01	300.62
1/19/2012		5974	0.00	46.69	5974	0.00	115.71	5974	0.00	124.59	5993	0.00	975.34	5958	0.00	300.62
2/15/2012		6189	0.00	46.80	6189	0.00	115.74	6189	0.01	126.03	6368	0.03	986.48	6364	0.00	300.62
3/15/2012		6421	0.00	46.89	6421	0.00	115.79	6421	0.01	127.43	6946	0.03	1005.89	6942	0.00	300.62
4/19/2012		6701	0.00	47.04	6701	0.00	115.84	6701	0.00	128.02	7629	0.05	1038.74	7625	0.00	301.65
5/16/2012		6916	0.00	47.18	6916	0.00	115.88	6916	0.00	128.27	8143	0.04	1060.30	8138	0.00	303.65
Pulse-off period June 1, 2012 to August 14, 2012																
8/14/2012		7094	0.00	47.54	7094	0.00	116.20	7094	0.00	129.03	8546	0.05	1081.05	8541	0.01	306.52
9/17/2012		7317	0.00	47.99	7317	0.00	116.40	7317	0.02	133.04	9033	0.04	1102.58	9029	0.01	311.31
Pulse-off period September 17, 2012 to November 14, 2012																
11/15/2012		7320	0.00	48.00	7320	0.00	116.40	7320	0.00	133.05	9037	0.05	1102.78	9033	0.01	311.34
12/14/2012		7518	0.00	48.24	7518	0.00	116.86	7518	0.00	133.94	9439	0.00	1103.57	9436	0.01	313.67

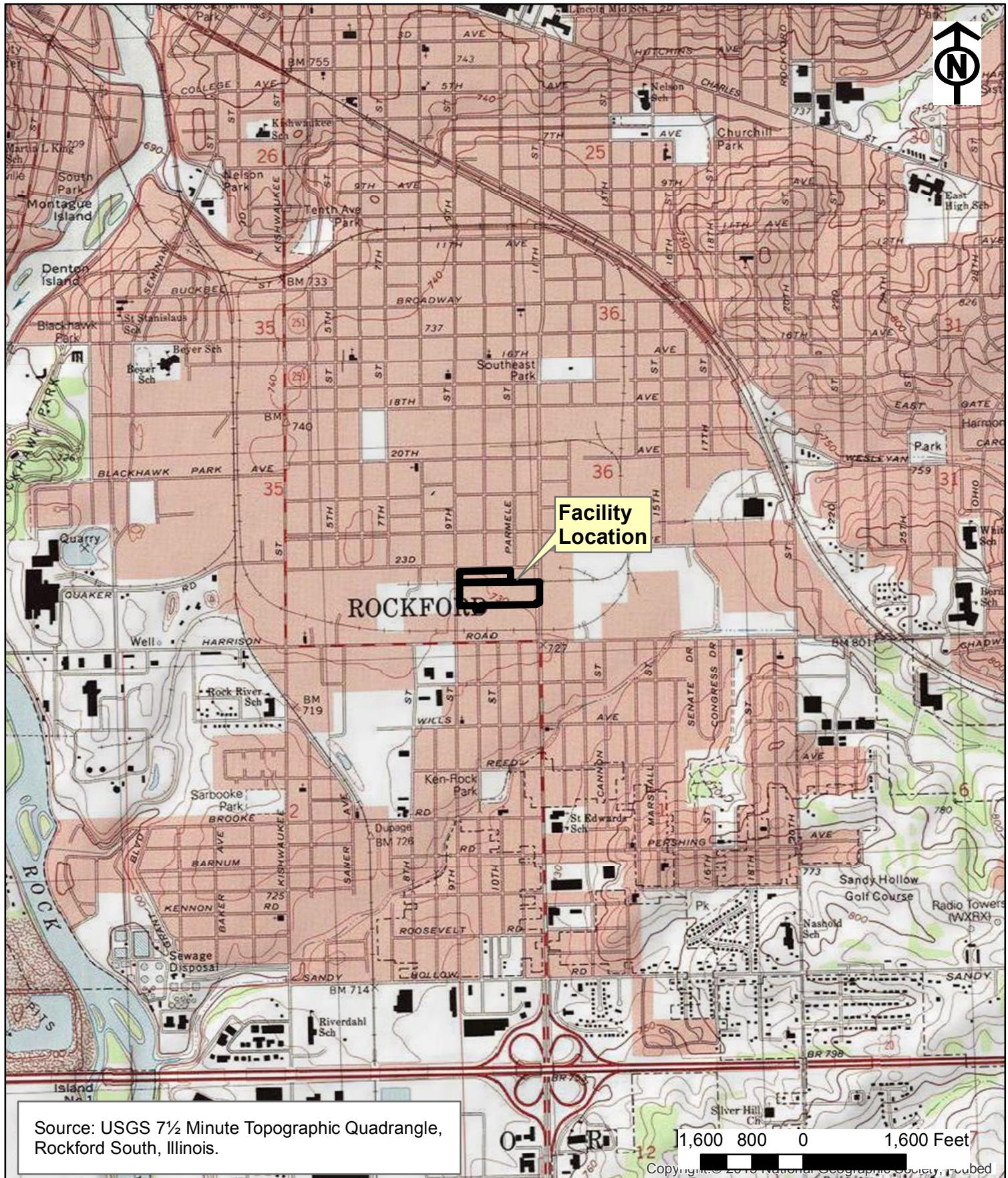
Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
Pulse-off period December 14, 2012 to February 26, 2013																
2/26/2013	7518	0.00	48.19	7518	0.00	116.86	7519	0.00	133.94	9439	0.00	1103.57	9511	0.00	313.72	1716.32
4/11/2013	7723	0.00	48.32	7723	0.00	116.97	8134	0.00	134.40	9876	0.00	1105.48	9952	0.02	322.58	1727.74
Pulse-off period April 11, 2013 to May 10, 2013																
5/10/2013	7724	0.00	48.32	7724	0.00	116.97	8135	0.00	134.40	9882	0.00	1105.50	9958	0.01	322.66	1727.85
7/15/2013	8039	0.00	48.86	8039	0.00	117.21	9082	0.00	134.70	10907	0.00	1108.40	10984	0.02	339.59	1748.76
Pulse-off period July 15, 2013 to September 9, 2013																
9/9/2013	8040	0.00	48.86	8040	0.00	117.21	9083	0.00	134.70	10914	0.00	1108.44	10991	0.01	339.65	1748.86
11/18/2013	8372	0.00	49.15	8372	0.00	117.30	10081	0.00	136.08	11992	0.00	1110.90	12069	0.02	356.69	1770.12
Pulse-off period November 18, 2013 to January 15, 2014																
1/15/2014	8651	0.00	49.36	8651	0.00	117.51	10916	0.00	136.88	11997	0.00	1110.91	12074	0.01	356.73	1771.39
3/14/2014	8894	0.00	49.48	8894	0.00	117.52	11645	0.00	137.13	12980	0.00	1112.65	13057	0.01	368.96	1785.75
Pulse-off period March 14, 2014 to May 15, 2014																
5/15/2014	8990	0.00	49.54	8990	0.00	117.64	11934	0.00	137.98	12986	0.00	1112.67	13063	0.01	369.01	1786.83
7/23/2014	9321	0.00	50.01	9321	0.00	117.79	12926	0.00	138.52	14627	0.00	1113.02	14714	0.00	371.61	1790.95
Pulse-off period July 23, 2014 to September 16, 2014																
9/16/2014	9494	0.00	50.32	9494	0.00	118.05	13445	0.00	139.28	14628	0.00	1113.03	14715	0.00	371.61	1792.29
11/14/2014	9777	0.00	50.45	9777	0.00	118.12	14294	0.00	139.95	16008	0.00	1116.04	16095	0.00	377.77	1802.33
Pulse-off period November 14, 2014 to January 9, 2015																
1/9/2015	9778	0.00	50.45	9778	0.00	118.12	14299	0.00	139.96	16015	0.00	1116.05	16102	0.00	377.78	1802.36
3/13/2015	10045	0.00	50.56	10045	0.00	118.15	15099	0.00	140.58	17178	0.00	1117.32	17322	0.00	382.64	1809.25
Pulse-off period March 13, 2015 to May 15, 2015																
5/15/2015	10046	0.00	50.56	10046	0.00	118.15	15102	0.00	140.58	17186	0.00	1117.34	17329	0.00	382.66	1809.28
7/16/2015	10343	0.00	50.92	10343	0.00	118.25	15992	0.00	141.23	18436	0.00	1121.16	18578	0.00	384.37	1815.93
Pulse-off period July 16, 2015 to September 22, 2015																
9/22/2015	10343	0.00	50.92	10343	0.00	118.26	15994	0.00	141.24	18439	0.00	1121.16	18580	0.00	384.37	1815.95
11/20/2015	10626	0.00	51.03	10626	0.00	118.33	16842	0.00	141.50	19832	0.00	1126.63	19973	0.00	387.19	1824.68
Pulse-off period November 20, 2015 to January 19, 2016																
1/19/2016	10627	0.00	51.03	10627	0.00	118.33	16846	0.00	141.50	19841	0.00	1126.63	19982	0.00	387.20	1824.70
3/18/2016	10883	0.00	51.14	10883	0.00	118.36	17612	0.00	141.72	21088	0.00	1128.65	21229	0.00	389.97	1829.83
Pulse-off period March 18, 2016 to May 19, 2016																
5/19/2016	10884	0.00	51.14	10884	0.00	118.36	17615	0.00	141.72	21092	0.00	1128.65	21233	0.00	389.97	1829.84
7/22/2016	11190	0.00	51.54	11190	0.00	118.45	17921	0.00	141.87	22610	0.00	1129.38	22751	0.00	392.33	1833.57
Pulse-off period July 22, 2016 to September 20, 2016																
9/20/2016	11191	0.00	51.54	11191	0.00	118.45	17923	0.00	141.87	22611	0.00	1129.38	22752	0.00	392.33	1833.58
11/28/2016	11521	0.00	51.74	11521	0.00	118.53	18915	0.00	141.98	24162	0.00	1129.51	24305	0.00	394.93	1836.69
Pulse-off period November 28, 2016 to January 24, 2017																
1/24/2017	11522	0.00	51.74	11522	0.00	118.53	18917	0.00	141.98	24166	0.00	1129.51	24309	0.00	394.94	1836.69
3/23/2017</td																

Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - March 2020
Hamilton Sundstrand Corporation
Plant 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
Pulse-off period November 17, 2017 to January 22, 2018																
1/22/2018	12401	0.00	52.42	12401	0.00	118.70	21554	0.00	142.89	28489	0.00	1137.01	28634	0.00	406.93	1857.94
3/23/2018	12655	0.00	52.49	12655	0.00	118.70	22316	0.00	143.00	29726	0.00	1138.32	29870	0.00	409.22	1861.73
Pulse-off period March 23, 2018 to May 21, 2018																
5/21/2018	12655	0.00	52.49	12656	0.00	118.70	22318	0.00	143.00	29731	0.00	1138.32	29870	0.00	409.22	1861.74
7/26/2018	12972	0.00	52.96	12972	0.00	118.79	23267	0.00	143.23	30783	0.00	1141.50	31423	0.00	412.07	1868.56
Pulse-off period July 26, 2018 to September 17, 2018																
9/17/2018	13226	0.00	53.47	13226	0.00	119.34	24030	0.00	143.58	30791	0.00	1141.53	31431	0.00	412.08	1870.00
11/19/2018	13528	0.00	53.63	13528	0.00	119.39	24935	0.00	143.70	32280	0.00	1142.65	32920	0.00	413.71	1873.08
Pulse-off period November 19, 2018 to January 21, 2019																
1/21/2019	13529	0.00	53.63	13529	0.00	119.39	24937	0.00	143.70	32284	0.00	1142.65	32944	0.00	413.72	1873.09
3/21/2019	13795	0.00	53.70	13795	0.00	119.41	25737	0.00	143.85	33265	0.00	1143.06	33985	0.00	414.15	1874.18
Pulse-off period March 21, 2019 to May 24, 2019																
5/24/2019	13796	0.00	53.70	13796	0.00	119.41	25738	0.00	143.85	33269	0.00	1143.06	33989	0.00	414.15	1874.18
7/29/2019	14113	0.00	53.99	14113	0.00	119.58	26690	0.00	144.57	34775	0.00	1143.50	35359	0.00	417.08	1878.73
Pulse-off period July 29, 2019 to September 27, 2019																
9/27/2019	14113	0.00	53.99	14113	0.00	119.58	26691	0.00	144.58	34779	0.00	1143.50	-	-	417.08	1878.73
12/9/2019	14444	0.00	54.52	14444	0.00	119.64	34312	0.00	149.89	36495	0.00	1143.65	-	-	417.08	1884.77
Pulse-off period December 9, 2019 to January 21, 2020																
1/21/2020	14445	0.00	54.52	14445	0.00	119.64	34313	0.00	149.89	36523	0.00	1143.66	35360	0.00	417.08	1884.79
3/20/2020	14700	0.00	54.85	14700	0.00	119.70	35077	0.00	150.05	37827	0.00	1143.75	36661	0.00	418.35	1886.70

Figures



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Facility Location Map
Area 9/10 Remedial Action
Southeast Rockford Groundwater
Contamination Superfund Site
Rockford, IL

FIGURE NUMBER

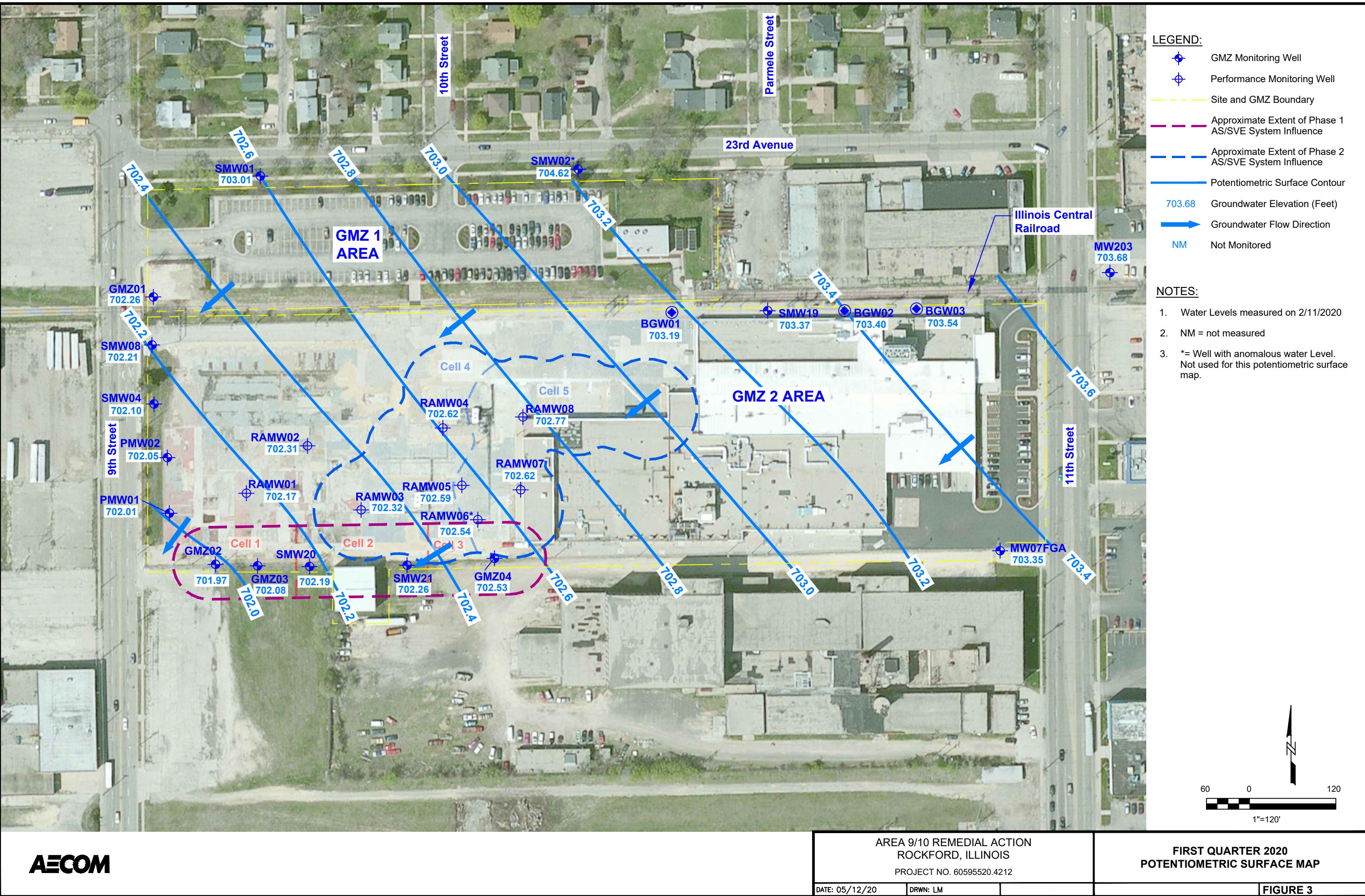
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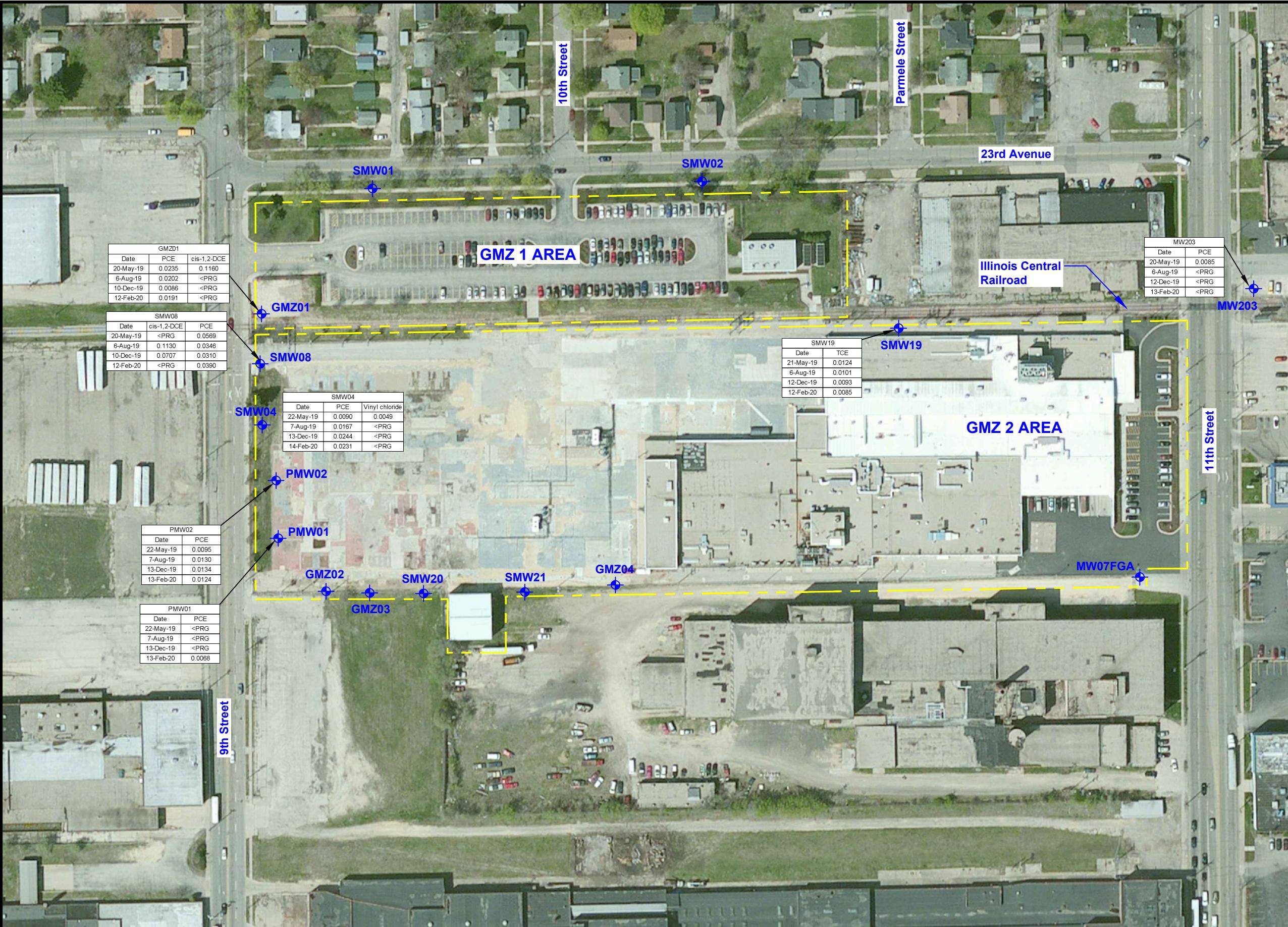
DRAWN BY:	DATE:	PROJECT NUMBER:	FIGURE NUMBER
CC	8/2/2018	60562097.4213	1 of 1



LEGEND:

- GMZ Monitoring Well
- Performance Monitoring Well
- Site and GMZ Boundary
- Approximate Extent of Phase 1 AS/SVE System Influence
- Approximate Extent of Phase 2 AS/SVE System Influence

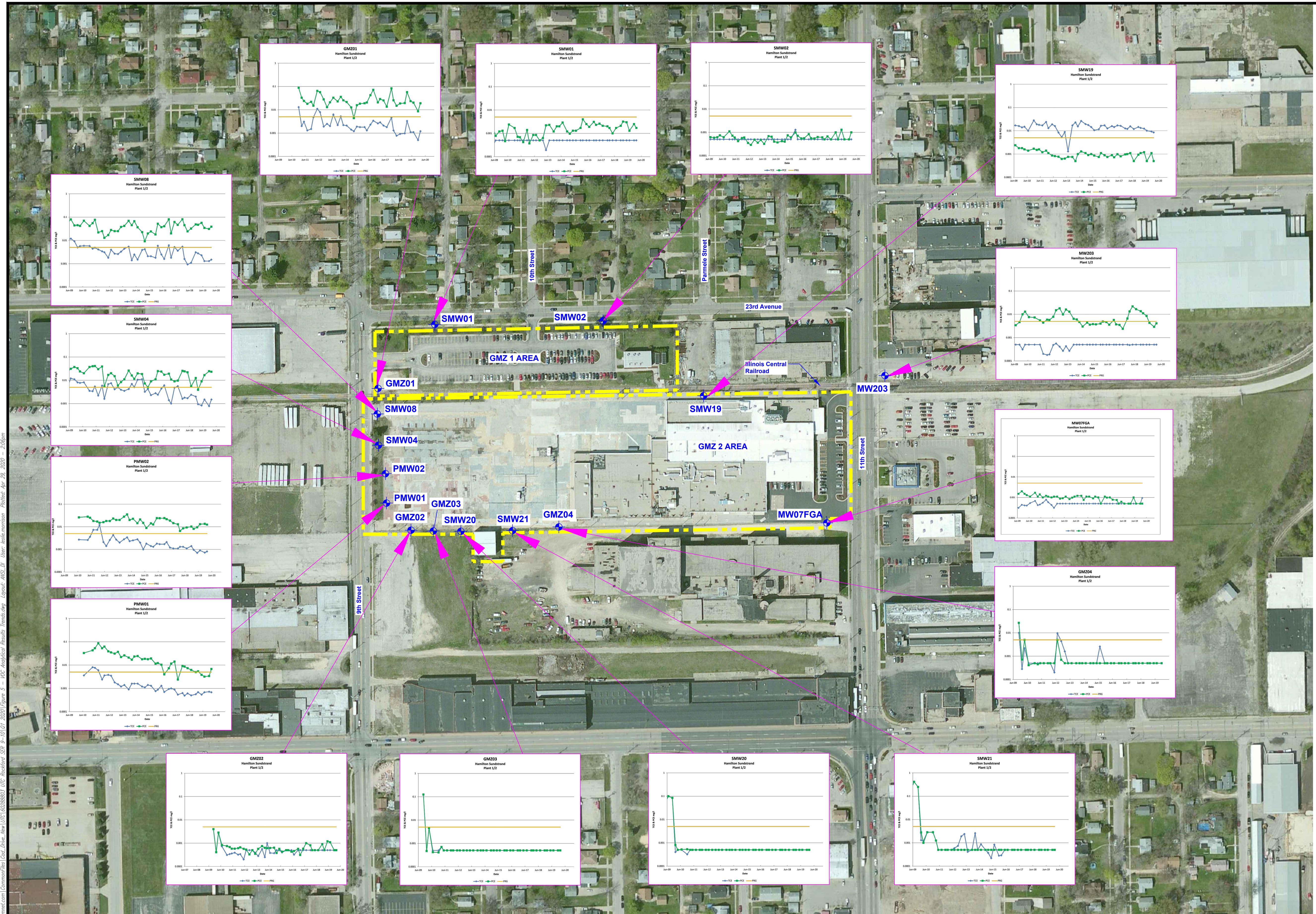




AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60595520.4211

AECOM

FIRST QUARTER 2020
12 MONTH GMZ WELL GROUNDWATER
ANALYTICAL RESULTS ABOVE THE PRG

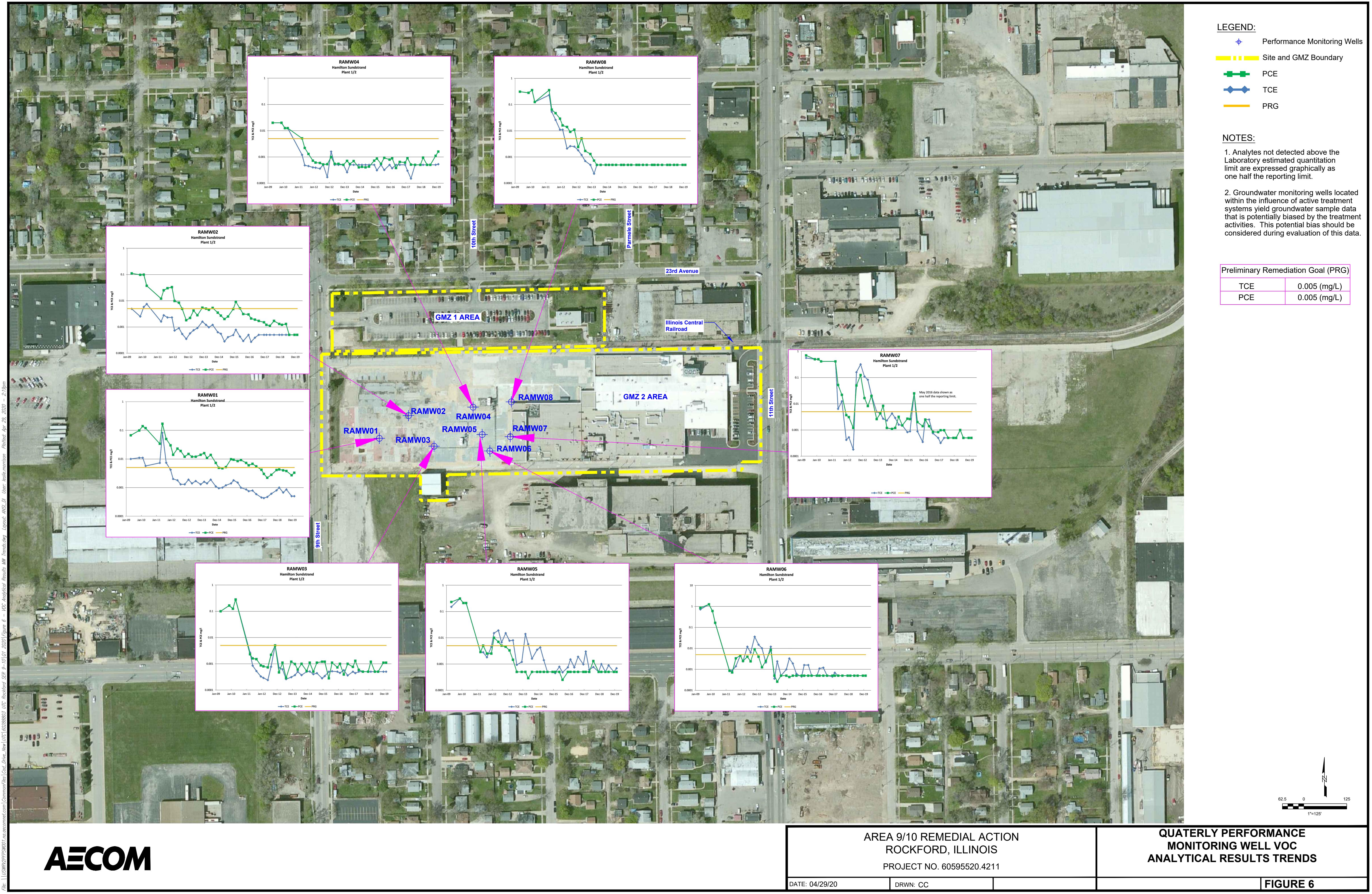


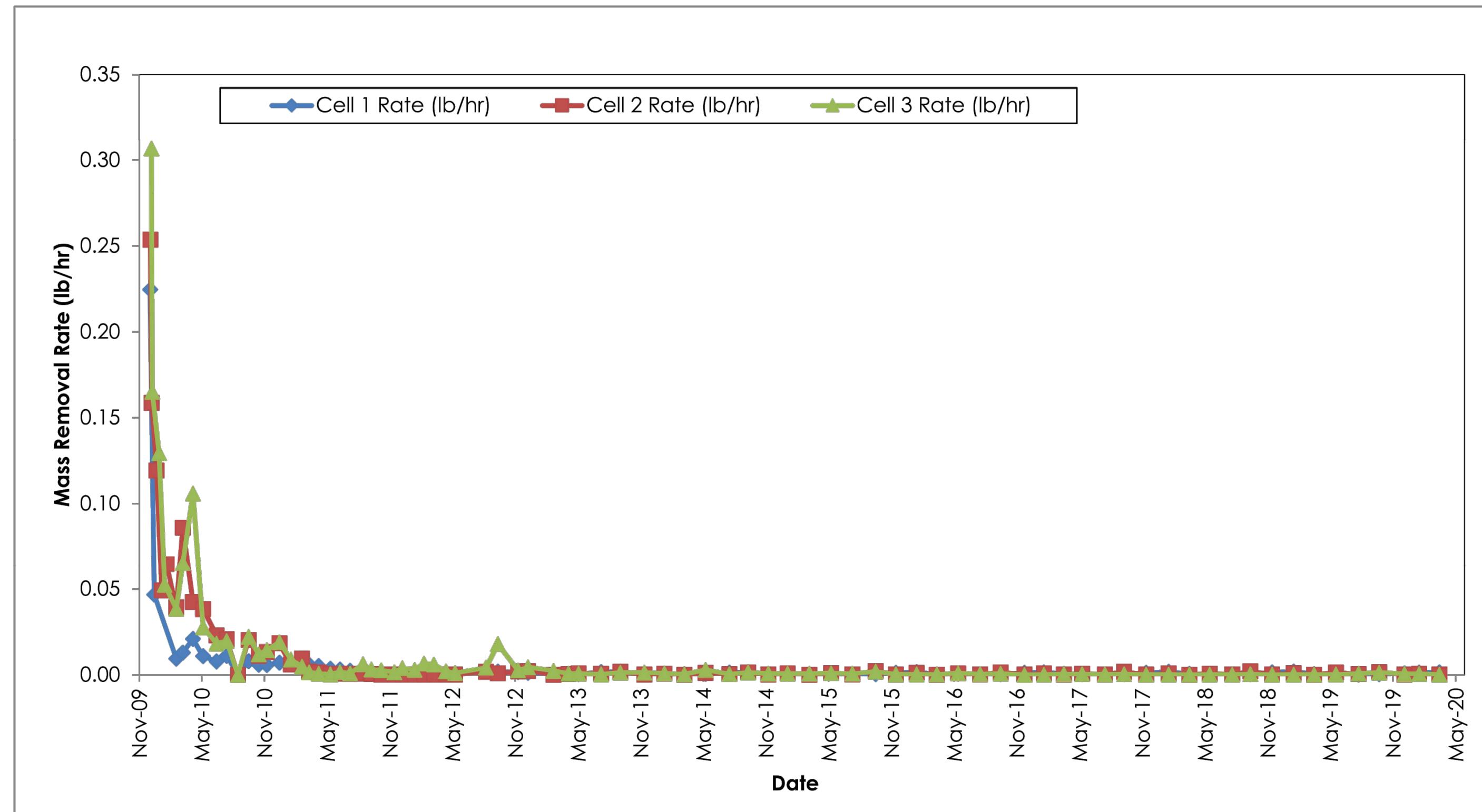
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60595520.4211

DATE: 04/29/20

DRWN: CC

QUARTERLY GMZ VOC
ANALYTICAL RESULTS TRENDS





AREA 9/10 REMEDIAL ACTION

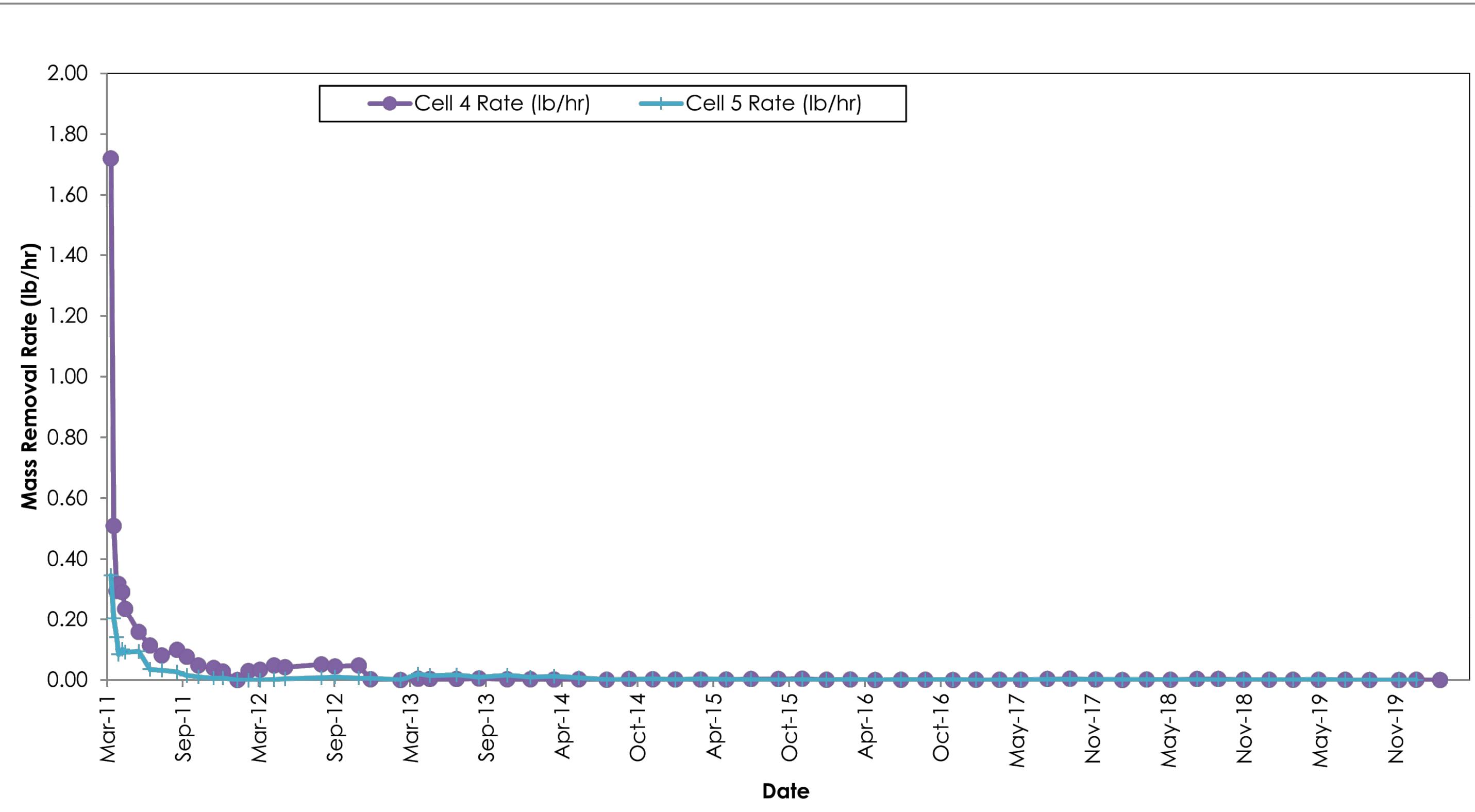
ROCKFORD, ILLINOIS

PROJECT NO. 60595520.4211

DATE: 04/29/20 DRWN: CC

AVERAGE VOC MASS REMOVAL RATE
VS TIME PHASE 1 AS/SVE SYSTEM**AECOM**

FIGURE 7



AECOM

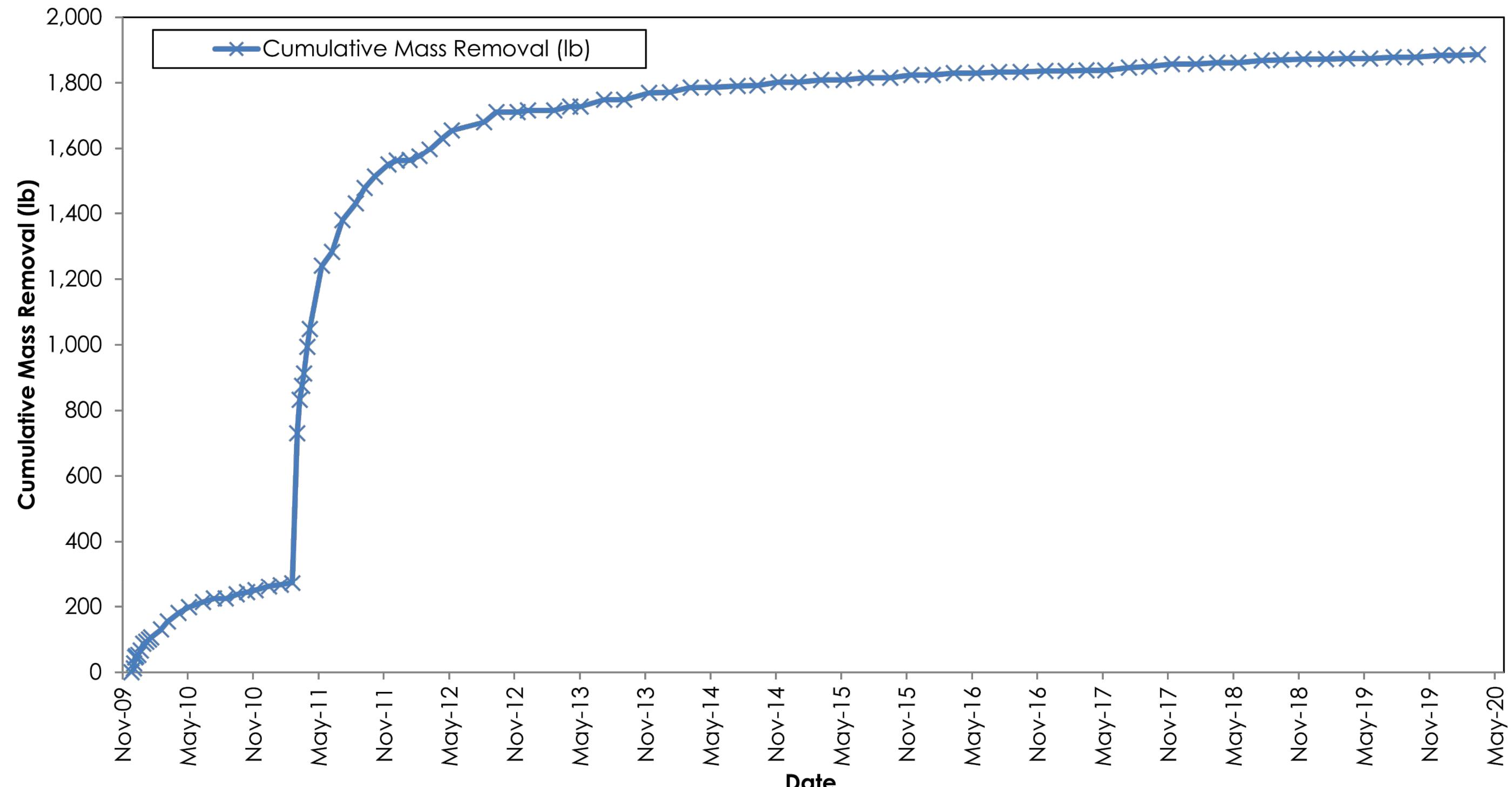
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60595520.4211

AVERAGE VOC MASS REMOVAL RATE
VS TIME PHASE 2 AS/SVE SYSTEM

DATE: 04/29/20

DRWN: CC

FIGURE 8



Appendix A

First Quarter 2020 GMZ and Performance Monitoring Well Analytical Data

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60595520

SGS Job Number: JD3298

Sampling Dates: 02/12/20 - 02/14/20



Report to:

AECOM, INC.
4320 Winfield Road
Warrenville, IL 60555
Peter.Hollatz@AECOM.com

ATTN: Peter Hollatz

Total number of pages in report: **256**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Laura Degenhardt
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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Sample Summary

United Technologies Corporation

Job No: JD3298

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
---------------	----------------	---------	----------	------------------	------------------

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

JD3298-1	02/12/20	10:35 AH	02/15/20	AQ	Ground Water	HSSER-SMW01-021220
JD3298-2	02/12/20	10:35 AS	02/15/20	AQ	Ground Water	HSSER-SMW08-021220
JD3298-3	02/12/20	10:45 AS	02/15/20	AQ	Field Blank Water	HSSER-FBLK01-021220
JD3298-4	02/12/20	11:50 AH	02/15/20	AQ	Ground Water	HSSER-SMW02-021220
JD3298-5	02/12/20	11:55 AS	02/15/20	AQ	Ground Water	HSSER-GMZ01-021220
JD3298-6	02/12/20	13:00 AS	02/15/20	AQ	Ground Water	HSSER-MW07FGA-021220
JD3298-7	02/12/20	13:25 AH	02/15/20	AQ	Ground Water	HSSER-SMW19-021220
JD3298-8	02/12/20	14:50 AS	02/15/20	AQ	Ground Water	HSSER-GMZ04-021220
JD3298-9	02/12/20	15:15 AH	02/15/20	AQ	Ground Water	HSSER-SMW21-021220
JD3298-10	02/13/20	10:45 AS	02/15/20	AQ	Ground Water	HSSER-SMW20-021320
JD3298-11	02/13/20	12:05 AS	02/15/20	AQ	Ground Water	HSSER-GMZ03-021320
JD3298-12	02/13/20	13:25 AS	02/15/20	AQ	Ground Water	HSSER-GMZ02-021320

Sample Summary

(continued)

United Technologies Corporation

Job No: JD3298

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
JD3298-12D	02/13/20	13:25 AS	02/15/20	AQ Water Dup/MSD	HSSER-MSD01-021320
JD3298-12S	02/13/20	13:25 AS	02/15/20	AQ Water Matrix Spike	HSSER-MS01-021320
JD3298-14	02/13/20	14:40 AS	02/15/20	AQ Ground Water	HSSER-PMW01-021320
JD3298-15	02/13/20	16:05 AS	02/15/20	AQ Ground Water	HSSER-PMW02-021320
JD3298-16	02/13/20	16:20 AS	02/15/20	AQ Equipment Blank	HSSER-EBLK01-021320
JD3298-17	02/13/20	16:20 AH	02/15/20	AQ Ground Water	HSSER-MW203-021320
JD3298-18	02/13/20	00:00 AS	02/15/20	AQ Ground Water	HSSER-DUP01-021320
JD3298-19	02/14/20	11:40 AS	02/15/20	AQ Ground Water	HSSER-SMW04-021420
JD3298-20	02/14/20	11:40	02/15/20	AQ Trip Blank Water	HSSER-TBLK01-021220

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	United Technologies Corporation	Job No	JD3298
Site:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL	Report Date	2/25/2020 5:07:05 PM

On 02/15/2020, 17 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD3298 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ	Batch ID: V2E8003
-------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD3298-12MS, JD3298-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ	Batch ID: V2E8004
-------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD3298-6MS, JD3298-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Page 1 of 3

Job Number: JD3298

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 02/12/20 thru 02/14/20

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD3298-1 HSSER-SMW01-021220						
Tetrachloroethene	0.0017	0.0010	0.00090	mg/l	SW846 8260C	
JD3298-2 HSSER-SMW08-021220						
1,1-Dichloroethane	0.0066	0.0010	0.00057	mg/l	SW846 8260C	
1,1-Dichloroethene	0.00066 J	0.0010	0.00059	mg/l	SW846 8260C	
cis-1,2-Dichloroethene	0.0320	0.0010	0.00051	mg/l	SW846 8260C	
Tetrachloroethene	0.0390	0.0010	0.00090	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.0041	0.0010	0.00054	mg/l	SW846 8260C	
Trichloroethene	0.0015	0.0010	0.00053	mg/l	SW846 8260C	
JD3298-3 HSSER-FBLK01-021220						
No hits reported in this sample.						
JD3298-4 HSSER-SMW02-021220						
Tetrachloroethene	0.0010	0.0010	0.00090	mg/l	SW846 8260C	
JD3298-5 HSSER-GMZ01-021220						
1,1-Dichloroethane	0.0092	0.0010	0.00057	mg/l	SW846 8260C	
cis-1,2-Dichloroethene	0.0021	0.0010	0.00051	mg/l	SW846 8260C	
Tetrachloroethene	0.0191	0.0010	0.00090	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.0024	0.0010	0.00054	mg/l	SW846 8260C	
Trichloroethene	0.0012	0.0010	0.00053	mg/l	SW846 8260C	
JD3298-6 HSSER-MW07FGA-021220						
Tetrachloroethene	0.00094 J	0.0010	0.00090	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.00074 J	0.0010	0.00054	mg/l	SW846 8260C	
JD3298-7 HSSER-SMW19-021220						
cis-1,2-Dichloroethene	0.00067 J	0.0010	0.00051	mg/l	SW846 8260C	
Trichloroethene	0.0085	0.0010	0.00053	mg/l	SW846 8260C	
JD3298-8 HSSER-GMZ04-021220						
No hits reported in this sample.						

Summary of Hits

Job Number: JD3298
Account: United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/12/20 thru 02/14/20

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD3298-9 HSSER-SMW21-021220						
1,1,1-Trichloroethane	0.0023		0.0010	0.00054	mg/l	SW846 8260C
JD3298-10 HSSER-SMW20-021320						
No hits reported in this sample.						
JD3298-11 HSSER-GMZ03-021320						
No hits reported in this sample.						
JD3298-12 HSSER-GMZ02-021320						
1,1-Dichloroethane	0.00062 J		0.0010	0.00057	mg/l	SW846 8260C
JD3298-14 HSSER-PMW01-021320						
Tetrachloroethene	0.0068		0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0018		0.0010	0.00054	mg/l	SW846 8260C
Trichloroethene	0.00068 J		0.0010	0.00053	mg/l	SW846 8260C
JD3298-15 HSSER-PMW02-021320						
1,1-Dichloroethane	0.0038		0.0010	0.00057	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0064		0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene	0.0124		0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0015		0.0010	0.00054	mg/l	SW846 8260C
Trichloroethene	0.00081 J		0.0010	0.00053	mg/l	SW846 8260C
JD3298-16 HSSER-EBLK01-021320						
No hits reported in this sample.						
JD3298-17 HSSER-MW203-021320						
Tetrachloroethene	0.0041		0.0010	0.00090	mg/l	SW846 8260C
JD3298-18 HSSER-DUP01-021320						
No hits reported in this sample.						
JD3298-19 HSSER-SMW04-021420						
1,1-Dichloroethane	0.0051		0.0010	0.00057	mg/l	SW846 8260C

Summary of Hits

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Job Number: JD3298

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 02/12/20 thru 02/14/20

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
cis-1,2-Dichloroethene		0.0034	0.0010	0.00051	mg/l	SW846 8260C
Tetrachloroethene		0.0231	0.0010	0.00090	mg/l	SW846 8260C
1,1,1-Trichloroethane		0.0021	0.0010	0.00054	mg/l	SW846 8260C
Trichloroethene		0.0015	0.0010	0.00053	mg/l	SW846 8260C
Vinyl chloride		0.0013	0.0010	0.00079	mg/l	SW846 8260C

JD3298-20 HSSER-TBLK01-021220

No hits reported in this sample.

Sample Results

Report of Analysis

SGS North America Inc.

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Client Sample ID:	HSSER-SMW01-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-1	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159612.D	1	02/18/20 15:13	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0017	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	106%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW08-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-2	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159613.D	1	02/18/20 15:44	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0066	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	0.00066	0.0010	0.00059	mg/l	J
156-59-2	cis-1,2-Dichloroethene	0.0320	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0390	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0041	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0015	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

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Client Sample ID:	HSSER-FBLK01-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-3	Date Received:	02/15/20
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159614.D	1	02/18/20 16:15	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW02-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-4	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159615.D	1	02/18/20 16:45	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0010	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ01-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-5	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159616.D	1	02/18/20 17:16	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0092	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0021	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0191	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0024	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0012	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID: HSSER-MW07FGA-021220**Lab Sample ID:** JD3298-6**Date Sampled:** 02/12/20**Matrix:** AQ - Ground Water**Date Received:** 02/15/20**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159626.D	1	02/19/20 09:31	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00094	0.0010	0.00090	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00074	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW19-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-7	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159617.D	1	02/18/20 17:46	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.00067	0.0010	0.00051	mg/l	J
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0085	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ04-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-8	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159618.D	1	02/18/20 18:17	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW21-021220	Date Sampled:	02/12/20
Lab Sample ID:	JD3298-9	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159619.D	1	02/18/20 18:47	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0023	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW20-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-10	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159620.D	1	02/18/20 19:18	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ03-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-11	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159628.D	1	02/19/20 10:32	ED	n/a	n/a	V2E8004
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	107%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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4.12
4**Client Sample ID:** HSSER-GMZ02-021320**Lab Sample ID:** JD3298-12**Date Sampled:** 02/13/20**Matrix:** AQ - Ground Water**Date Received:** 02/15/20**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159604.D	1	02/18/20 11:12	ED	n/a	n/a	V2E8003
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00062	0.0010	0.00057	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-PMW01-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-14	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159637.D	1	02/19/20 15:06	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0068	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0018	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.00068	0.0010	0.00053	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-PMW02-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-15	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159638.D	1	02/19/20 15:37	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0038	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0064	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0124	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0015	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.00081	0.0010	0.00053	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-EBLK01-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-16	Date Received:	02/15/20
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159639.D	1	02/19/20 16:07	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-MW203-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-17	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159627.D	1	02/19/20 10:01	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0041	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-DUP01-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3298-18	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159640.D	1	02/19/20 16:37	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW04-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3298-19	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159641.D	1	02/19/20 17:08	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0051	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0034	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0231	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0021	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.0015	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	0.0013	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-TBLK01-021220	Date Sampled:	02/14/20
Lab Sample ID:	JD3298-20	Date Received:	02/15/20
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2E159633.D	1	02/19/20 13:04	ED	n/a	n/a	V2E8004
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		81-124%
2037-26-5	Toluene-D8	93%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms**5****Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS

GW
TB

CHAIN OF CUSTODY

SGS North America Inc., Dayton
 2235 Route 130, Dayton, NJ 08810
 TEL: 732-329-0200 FAX: 732-329-3499/3480
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Page 1 of 2

FEDA/EX Tracking #	13156296285	Bottle Order Control #	
SSS Quote #		SGS Job #	JD3298

Client / Reporting Information		Project Information						Requested Analysis		Matrix Codes	
Company Name: AECOM	Project Name: UTAS Plants 1/a Facility	Street:	Billing Information (if different from Report to)							DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment DI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WB - Water Blank FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank	
Street Address: 4130 Winfield Rd	City: Warrenville IL 60555	State: IL	City: Roseland IL	State: IL	Zip: 60435520	Project Contact: Peter Hollatz	Client Purchase Order #:	City:	State:	Zip:	
Phone #:	Project Manager: Peter Hollatz	Attention:									
Sampler(s) Name(s): A. Holkatz/A. Sulikowsky	Phone #: (630) 555-20										
SGS Sample #	Field ID / Point of Collection	MECH/DI Vial #	Date	Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	Number of preserved Bottles		
1	HSEFR-SMW01-021220	2/12-20 1035	AH G	6W	3	X			X		
2	HSEFR-SMW02-021220	2/12-20 1035	AS G	6W	3	X			X		
3	HSEFR-FB4401-021220	2/12-20 1045	AS G	6W	3	X			X		
4	HSEFR-SMW03-021220	2/12-20 1150	AH G	6W	3	X			X		
5	HSEFR-GM201-021220	2/12-20 1155	AE G	6W	3	X			X		
6	HSEFR-MW0780-021220	2/12-20 1300	AS G	6W	3	X			X		
7	HSEFR-SMW19-021220	2/12-20 1325	AH G	6W	3	X			X		
8	HSEFR-GM204-021220	2/12-20 1450	AS G	6W	3	X			X		
9	HSEFR-SMW21-021220	2/12-20 1515	AH G	6W	3	X			X		
10	HSEFR-SMW20-021220	2/12-20 1545	AS G	6W	3	X			X		
11	HSEFR-GM203-021220	2/13-20 0201	AS G	6W	3	X			X		
12	HSEFR-GM202-021220	2/13-20 1325	AS G	6W	3	X			X		
Turn Around Time (Business Days)											
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____ <small>All data available via LabLink.</small>				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier 1 (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKOP				<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MA MCP Criteria <input type="checkbox"/> CT RCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format			
Approved By (SGS PM): _____ Date: _____				Deliverable				Comments / Special Instructions			
* Approval needed for 1-3 Business Day TAT				* LIST VOC's * VOA RC Viral				http://www.sgs.com/en/terms-and-conditions			
Sample Custody must be documented below each time samples change possession, including courier delivery. Relinquished by: FCN EX Received By: FCN EX Relinquished By: FCN EX Received By: John Kuer 1 2/14-20 1000 1 2/14-20 1000 2 2/14-20 1000 2 Relinquished by: 3 Received By: 4 Relinquished by: 4 Received By: 4 3 Date / Time: 5 Received By: 5 Custody Seal #: IR-4 Inspect: ✓ Preserved where applicable: ✓ Therm. ID: IR-4 On Ice: ✓ Cooler Temp. °C: 14 5											

INITIAL ASSESSMENT **2B7**

LABEL VERIFICATION _____

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

JD3298: Chain of Custody

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CHAIN OF CUSTODY

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Client / Reporting Information		Project Information		Requested Analysis		Matrix Codes DW - Drinking Water GW - Ground Water SW - Surface Water SO - Soil SL - Sludge SEED - Sediment OI - Oil LIQ - Other Liquid AER - Air SOL - Other Solid WTR - Water FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank																	
Company Name: AECOM	Project Name: UTAS Plant 1/2 Facility	Street:	Billing Information (if different from Report to): Company Name:																				
Street Address: 4320 W infeld Rd	City: Warrenville IL	State: IL	Zip: 60555	City: Rockford	State: IL																		
City: Warrenville IL	State: IL	Zip: 60555	City: Rockford	State: IL	Zip: 60555																		
Project Contact: Peter Hollatz	E-mail: (peter.hollatz@wsp.com)	Project #: 100595520	Street Address:																				
Phone #:		Client Purchase Order #:	City:	State:	Zip:																		
Sample(s) Name(s): A Hollatz / A Suklasky	Phone #:	Project Manager: Peter Hollatz	Attention:																				
SOG: Service #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by		Crts (G) Comp (C)	Matrix	# of bottles	Number of preserved Bottles	VOC's												
13	HSSER-M1501-021320	2-13-20	1325	AS	6		6W	3	X	X													
	HSSER-M1501-021320	2-13-20	1325	AS	6		6W	3	X	X													
14	HSSER-RM6001-021320	2-13-20	1440	AS	6	6W	3	X	X														
15	HSSER-PMW02-021320	2-13-20	1605	AS	6	6W	3	X	X														
16	HSSER-FBLK01-021320	2-13-20	K020	AS	6	6W	3	X	X														
17	HSSER-MW203-021320	2-13-20	1620	AS	6	6W	3	X	X														
18	HSSER-DUP01-021320	2-13-20	0000	AS	6	6W	3	X	X														
19	HSSER-SMGW1-021420	2-14-20	1140	AS	6	6W	3	X	X														
20	HSSER-TBK01-021320	2-13-20	-	-	-	-	2	X	X														
Turn Around Time (Business Days)										Comments / Special Instructions													
Approved By (SGS PM): _____ Date: _____					Deliverable					<i>list 13 VOC's</i>													
<input type="checkbox"/> 10 Business Days	<input type="checkbox"/> Commercial "A" (Level 1)	<input type="checkbox"/> NYASP Category A	<input type="checkbox"/> DOD-QSMS	<input type="checkbox"/> 5 Business Days	<input type="checkbox"/> Commercial "B" (Level 2)	<input type="checkbox"/> NYASP Category B		<input type="checkbox"/> 3 Business Days	<input type="checkbox"/> NJ Reduced (Level 3)	<input type="checkbox"/> MA MCP Criteria		<input type="checkbox"/> 2 Business Days	<input type="checkbox"/> Full Tier I (Level 4)	<input type="checkbox"/> CT RCP Criteria		<input type="checkbox"/> 1 Business Day	<input type="checkbox"/> Commercial "C"	<input type="checkbox"/> State Forms		<input type="checkbox"/> Other	<input type="checkbox"/> NJ DKGP	<input type="checkbox"/> EDD Format	
Approval needed for 1-3 Business Day TAT										Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw Data													
Sample Custody must be documented below each time sample changes possession, including courier delivery.										http://www.sgs.com/en/terms-and-conditions													
Ratiqualified by: <i>John Kline</i>	Date / Time: 2/14/20 1500	Received By: <i>Pete Fa</i>	Ratiqualified By: 2	Date / Time: 2/15/2020	Received By: 2																		
Ratiqualified by: 3	Date / Time: 3	Received By: 1	Ratiqualified By: 4	Date / Time: 4	Received By: 4																		
Ratiqualified by: 5	Date / Time: 5	Received By: 5	Ratiqualified By: 5	Date / Time: 5	Received By: 5																		
Custody Seal #										<input type="checkbox"/> intact	<input type="checkbox"/> Preserved where applicable	<input type="checkbox"/> On Ice	<input type="checkbox"/> Cooler Temp. °C										
Custody Seal #										<input type="checkbox"/> Not intact	<input type="checkbox"/> Absent	<input type="checkbox"/> Therm. ID:											

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

JD3298: Chain of Custody
Page 2 of 5

SGS Sample Receipt Summary

Job Number: JD3298 **Client:** AECOM, INC. **Project:** ENSRILW: UTAS PLANTS 1/2 FACILITY, ROCKF
Date / Time Received: 2/15/2020 10:00:00 AM **Delivery Method:** _____
Airbill #’s: _____

Cooler Temps (Raw Measured) °C: Cooler 1: (1.4);

Cooler Temps (Corrected) °C: Cooler 1: (1.1);

Cooler Security		Y or N	Y or N	Sample Integrity - Documentation		Y or N
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>			<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>			<input checked="" type="checkbox"/> <input type="checkbox"/>
Cooler Temperature		Y or N		Sample Integrity - Condition		Y or N
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>			1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	IR Gun			2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Cooler media:	Ice (Bag)			3. Condition of sample:	Intact	
4. No. Coolers:	1					
Quality Control Preservation		Y or N	N/A	Sample Integrity - Instructions		Y or N
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			2. Bottles received for unspecified tests	<input type="checkbox"/> <input checked="" type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>			3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
				5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	

Test Strip Lot #s:	pH 1-12: 229517	pH 12+: 208717	Other: (Specify) _____
--------------------	-----------------	----------------	------------------------

Comments

SM089-03
Rev. Date 12/7/17

JD3298: Chain of Custody

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5.1



GW
TB

CHAIN OF CUSTODY

REVISED

Page 1 of 2

SGS North America Inc. - Dayton 2235 Route 130, Dayton, OH 45410 TEL: 732-329-0200 FAX: 732-329-3499/3480 www.sgs.com/ehsusa										Job Order Control #					
Client / Reporting Information		Project Information								Requested Analysis		Matrix Codes			
Company Name: RECON		Project Name: UTAS Plants 1/2 Facility										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Sediment SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FR - Filtered EB - Equipment Blank RB - Rinse Blank TB - Trip Blank			
Street Address: 1820 W. Springfield Rd		Street:													
City: Warrenville	State: IL	Zip: 60555	Billing Information (If different from Report to)												
City: Roselle	State: IL	Zip: 60521	Company Name:												
Project Contact: Peter Hellertz		Project #: 100755520													
Phone #:		Street Address:													
Same/As Mailed		City: _____ State: _____ Zip: _____													
Phone #:		Project Manager: Peter Hellertz								Attention:					
Collection										VOC's					
SGS Sample #	Field ID / Point of Collection	MEOWH Vial #	Date	Time	Sampled by	Specified City/Country (C)	Matrix	# of bottles	Number of preserved bottles		X	LAB USE ONLY			
			9/2/20	10:35	AH G	GW			3	X			X		
1	HSFRA-SMW01-021220	9/2/20 10:35	AH G	GW	3	X	X			V1041					
2	HSFRA-SMW02-021220	9/2/20 10:35	AS G	GW	3	X	X			V1042					
3	HSFRA-FB401-021220	9/2/20 10:45	AS G	GW	3	X	X								
4	HSFRA-SMW02-021220	9/2/20 11:50	AH G	GW	3	X	X								
5	HSFRA-GM201-021220	9/2/20 11:55	AS G	GW	3	X	X								
6	HSFRA-MW75A-021220	9/2/20 13:00	AS G	GW	3	X	X								
7	HSFRA-SMW19-021220	9/2/20 13:35	AH G	GW	3	X	X								
8	HSFRA-6M204-021220	9/2/20 14:50	AS G	GW	3	X	X								
9	HSFRA-SMW21-021220	9/2/20 15:25	AH G	GW	3	X	X								
10	HSFRA-SMW20-021220	9/2/20 16:45	AS G	GW	3	X	X								
11	HSFRA-GM203-021220	9/2/20 16:50	AS G	GW	3	X	X								
12	HSFRA-GM204-021220	9/2/20 18:35	AS G	GW	3	X	X								
Turn Around Time (Business Days)										Deliverable		Comments / Special Instructions			
Approved By (SGS P/M) / Date:										<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier 1 (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKP		<input type="checkbox"/> NYASB Category A <input type="checkbox"/> NYASB Category B <input type="checkbox"/> MA MCP Criteria <input type="checkbox"/> CT MCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format		* LIST VOC's 13 * VOA & VOF	
Approval needed for 1-3 Business Day TAT										Commercial "A" = Results only; Commercial "B" + Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data		http://www.sgs.com/en/terms-and-conditions			
All data available via LabLink															
Sample Custody must be documented before each sample change or reprocessing, including courier delivery.										Received By: FCA/FX		Received By: Jane Kiser			
Requisitioned by: RECON	Date / Time: 2018-09-20 10:00	Received By: FCA/FX	Requisitioned By: FCA/FX	Date / Time: 2018-09-20 10:00	Received By: Jane Kiser										
Requisitioned by: RECON	Date / Time: 2018-09-20 10:00	Received By: 3	Requisitioned By: 4	Date / Time: 2018-09-20 10:00	Received By: 4										
Requisitioned by: RECON	Date / Time: 2018-09-20 10:00	Received By: 5	Custody Seal #	<input type="checkbox"/> In tact <input type="checkbox"/> Not intact <input type="checkbox"/> Absent		Therm. ID: IR-4	On Site: Y	Cooler Temp. °C: 1.4							

INITIAL ASSESSMENT 2BJ

LABEL VERIFICATION _____

EHSA-DAC-0023-02-FORM-Payroll - Standard COC.xlsx

JD3298: Chain of Custody
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CHAIN OF CUSTODY

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Page 1 of 2

Client / Reporting Information		Project Information		Requested Analysis																																																																																																																																							
Company Name: AFCOM		Project Name: UTTS Plant 1/2 Facility																																																																																																																																									
Street Address: 4320 Winfeld Rd		Street:																																																																																																																																									
City: Warrenville IL	State: IL	City: Rockford IL	State:	Billing Information (if different from Report to)																																																																																																																																							
Project Contact: Peter Hollatz		Project # (608)555-20		Company Name:																																																																																																																																							
Phone #		Client Purchase Order #		City:		State Zip:																																																																																																																																					
Sampler(s) Name(s): A Hollatz/ A Sukolsky		Phone # Peter Hollatz		Attention:																																																																																																																																							
<table border="1"> <thead> <tr> <th colspan="2">Collection</th> <th rowspan="2">MEONHO Val #</th> <th rowspan="2">Date</th> <th rowspan="2">Time</th> <th rowspan="2">Sampled by</th> <th colspan="6">Number of preserved bottles</th> </tr> <tr> <th>Sample #</th> <th>Field ID / Point of Collection</th> <th>Core (1)</th> <th>Core (2)</th> <th>Metric</th> <th># of bottles</th> <th>% HCH</th> <th>% HCO₂</th> <th>% HNE</th> <th>% DCH</th> <th>% ECH</th> <th>% MECH</th> </tr> </thead> <tbody> <tr><td>1</td><td>HSSER-M501-021320</td><td>2-13-20</td><td>1325</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>HSSER-M5021-021320</td><td>2-13-20</td><td>1325</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>14</td><td>HSSER-PHW01-021320</td><td>2-13-20</td><td>1440</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>15</td><td>HSSER-PHW02-021320</td><td>2-13-20</td><td>1405</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>16</td><td>HSSER-FBLK01-021320</td><td>2-13-20</td><td>1420</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>17</td><td>HSSER-MV403-021320</td><td>2-13-20</td><td>1620</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>19</td><td>HSSER-DUPO1-021320</td><td>2-13-20</td><td>0000</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td>20</td><td>HSSER-SM161G1-021420</td><td>2-14-20</td><td>1440</td><td>AS</td><td>6</td><td>GW</td><td>3</td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td>HSSER-TBLK01-021820</td><td>2-12-20</td><td>—</td><td>—</td><td>—</td><td>—</td><td>2</td><td>X</td><td></td><td></td><td></td></tr> </tbody> </table>								Collection		MEONHO Val #	Date	Time	Sampled by	Number of preserved bottles						Sample #	Field ID / Point of Collection	Core (1)	Core (2)	Metric	# of bottles	% HCH	% HCO ₂	% HNE	% DCH	% ECH	% MECH	1	HSSER-M501-021320	2-13-20	1325	AS	6	GW	3	X				2	HSSER-M5021-021320	2-13-20	1325	AS	6	GW	3	X				14	HSSER-PHW01-021320	2-13-20	1440	AS	6	GW	3	X				15	HSSER-PHW02-021320	2-13-20	1405	AS	6	GW	3	X				16	HSSER-FBLK01-021320	2-13-20	1420	AS	6	GW	3	X				17	HSSER-MV403-021320	2-13-20	1620	AS	6	GW	3	X				19	HSSER-DUPO1-021320	2-13-20	0000	AS	6	GW	3	X				20	HSSER-SM161G1-021420	2-14-20	1440	AS	6	GW	3	X					HSSER-TBLK01-021820	2-12-20	—	—	—	—	2	X			
Collection		MEONHO Val #	Date	Time	Sampled by	Number of preserved bottles																																																																																																																																					
Sample #	Field ID / Point of Collection					Core (1)	Core (2)	Metric	# of bottles	% HCH	% HCO ₂	% HNE	% DCH	% ECH	% MECH																																																																																																																												
1	HSSER-M501-021320	2-13-20	1325	AS	6	GW	3	X																																																																																																																																			
2	HSSER-M5021-021320	2-13-20	1325	AS	6	GW	3	X																																																																																																																																			
14	HSSER-PHW01-021320	2-13-20	1440	AS	6	GW	3	X																																																																																																																																			
15	HSSER-PHW02-021320	2-13-20	1405	AS	6	GW	3	X																																																																																																																																			
16	HSSER-FBLK01-021320	2-13-20	1420	AS	6	GW	3	X																																																																																																																																			
17	HSSER-MV403-021320	2-13-20	1620	AS	6	GW	3	X																																																																																																																																			
19	HSSER-DUPO1-021320	2-13-20	0000	AS	6	GW	3	X																																																																																																																																			
20	HSSER-SM161G1-021420	2-14-20	1440	AS	6	GW	3	X																																																																																																																																			
	HSSER-TBLK01-021820	2-12-20	—	—	—	—	2	X																																																																																																																																			
<p style="text-align: center;">Turn Around Time (Business Days)</p> <table border="1"> <tr> <td>Approved by (SGS PM) / Date:</td> <td>Deliverable:</td> <td>Comments / Special Instructions</td> </tr> <tr> <td> <input type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____ </td> <td> <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKGP </td> <td> <input type="checkbox"/> NYASB Category A <input type="checkbox"/> NYASB Category B <input type="checkbox"/> NJ MCP Criteria <input type="checkbox"/> CT RCR Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format </td> <td> <input type="checkbox"/> DOD-QSMS </td> </tr> </table> <p style="text-align: right;"><i>List 13 VOC's</i></p>								Approved by (SGS PM) / Date:	Deliverable:	Comments / Special Instructions	<input type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____	<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKGP	<input type="checkbox"/> NYASB Category A <input type="checkbox"/> NYASB Category B <input type="checkbox"/> NJ MCP Criteria <input type="checkbox"/> CT RCR Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format	<input type="checkbox"/> DOD-QSMS																																																																																																																													
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<p>Approved needed for 1-3 Business Day TAT</p> <p>Sample Custody must be documented below each time samples change possession, including courier delivery.</p> <table border="1"> <tr> <td>Retain/Released by: APD</td> <td>Date / Time: 2-14-20 1500</td> <td>Received By: FedEx</td> <td>Retain/Released By: FedEx</td> <td>Date / Time: 2-15-2020</td> <td>Received By: Jenae Kuey</td> </tr> <tr> <td>Retain/Released by: 3</td> <td>Date / Time:</td> <td>Received By:</td> <td>Retain/Released By:</td> <td>Date / Time:</td> <td>Received By:</td> </tr> <tr> <td>Retain/Released by:</td> <td>Date / Time:</td> <td>Received By:</td> <td>Custody Seal #</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="checkbox"/> intact</td> <td></td> <td>On Ice <input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="checkbox"/> not intact</td> <td><input type="checkbox"/> absent</td> <td>Therm. ID: _____</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Carrier Temp. °C: _____</td> </tr> </table>								Retain/Released by: APD	Date / Time: 2-14-20 1500	Received By: FedEx	Retain/Released By: FedEx	Date / Time: 2-15-2020	Received By: Jenae Kuey	Retain/Released by: 3	Date / Time:	Received By:	Retain/Released By:	Date / Time:	Received By:	Retain/Released by:	Date / Time:	Received By:	Custody Seal #						<input type="checkbox"/> intact		On Ice <input type="checkbox"/>				<input type="checkbox"/> not intact	<input type="checkbox"/> absent	Therm. ID: _____						Carrier Temp. °C: _____																																																																																																
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<p>http://www.sgs.com/en/terms-and-conditions</p>																																																																																																																																											

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JD3298: Chain of Custody
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Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JD3298ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD3298-1	Collected: 12-FEB-20 10:35 By: AH HSSER-SMW01-021220			Received: 15-FEB-20 By: JP		
JD3298-1	SW846 8260C	18-FEB-20 15:13	ED			V8260SL
JD3298-2	Collected: 12-FEB-20 10:35 By: AS HSSER-SMW08-021220			Received: 15-FEB-20 By: JP		
JD3298-2	SW846 8260C	18-FEB-20 15:44	ED			V8260SL
JD3298-3	Collected: 12-FEB-20 10:45 By: AS HSSER-FBLK01-021220			Received: 15-FEB-20 By: JP		
JD3298-3	SW846 8260C	18-FEB-20 16:15	ED			V8260SL
JD3298-4	Collected: 12-FEB-20 11:50 By: AH HSSER-SMW02-021220			Received: 15-FEB-20 By: JP		
JD3298-4	SW846 8260C	18-FEB-20 16:45	ED			V8260SL
JD3298-5	Collected: 12-FEB-20 11:55 By: AS HSSER-GMZ01-021220			Received: 15-FEB-20 By: JP		
JD3298-5	SW846 8260C	18-FEB-20 17:16	ED			V8260SL
JD3298-6	Collected: 12-FEB-20 13:00 By: AS HSSER-MW07FGA-021220			Received: 15-FEB-20 By: JP		
JD3298-6	SW846 8260C	19-FEB-20 09:31	ED			V8260SL
JD3298-7	Collected: 12-FEB-20 13:25 By: AH HSSER-SMW19-021220			Received: 15-FEB-20 By: JP		
JD3298-7	SW846 8260C	18-FEB-20 17:46	ED			V8260SL
JD3298-8	Collected: 12-FEB-20 14:50 By: AS HSSER-GMZ04-021220			Received: 15-FEB-20 By: JP		
JD3298-8	SW846 8260C	18-FEB-20 18:17	ED			V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JD3298

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD3298-9	Collected: 12-FEB-20 15:15 By: AH HSSER-SMW21-021220			Received: 15-FEB-20	By: JP	
JD3298-9	SW846 8260C	18-FEB-20 18:47	ED			V8260SL
JD3298-10	Collected: 13-FEB-20 10:45 By: AS HSSER-SMW20-021320			Received: 15-FEB-20	By: JP	
JD3298-10	SW846 8260C	18-FEB-20 19:18	ED			V8260SL
JD3298-11	Collected: 13-FEB-20 12:05 By: AS HSSER-GMZ03-021320			Received: 15-FEB-20	By: JP	
JD3298-11	SW846 8260C	19-FEB-20 10:32	ED			V8260SL
JD3298-12	Collected: 13-FEB-20 13:25 By: AS HSSER-GMZ02-021320			Received: 15-FEB-20	By: JP	
JD3298-12	SW846 8260C	18-FEB-20 11:12	ED			V8260SL
JD3298-14	Collected: 13-FEB-20 14:40 By: AS HSSER-PMW01-021320			Received: 15-FEB-20	By: JP	
JD3298-14	SW846 8260C	19-FEB-20 15:06	ED			V8260SL
JD3298-15	Collected: 13-FEB-20 16:05 By: AS HSSER-PMW02-021320			Received: 15-FEB-20	By: JP	
JD3298-15	SW846 8260C	19-FEB-20 15:37	ED			V8260SL
JD3298-16	Collected: 13-FEB-20 16:20 By: AS HSSER-EBLK01-021320			Received: 15-FEB-20	By: JP	
JD3298-16	SW846 8260C	19-FEB-20 16:07	ED			V8260SL
JD3298-17	Collected: 13-FEB-20 16:20 By: AH HSSER-MW203-021320			Received: 15-FEB-20	By: JP	
JD3298-17	SW846 8260C	19-FEB-20 10:01	ED			V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JD3298

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD3298-18	HSSEN-DUP01-021320	Collected: 13-FEB-20 00:00	By: AS	Received: 15-FEB-20	By: JP	
JD3298-18	SW846 8260C	19-FEB-20 16:37	ED			V8260SL
JD3298-19	HSSEN-SMW04-021420	Collected: 14-FEB-20 11:40	By: AS	Received: 15-FEB-20	By: JP	
JD3298-19	SW846 8260C	19-FEB-20 17:08	ED			V8260SL
JD3298-20	HSSEN-TBLK01-021220	Collected: 14-FEB-20 11:40	By:	Received: 15-FEB-20	By: JP	
JD3298-20	SW846 8260C	19-FEB-20 13:04	ED			V8260SL

SGS Internal Chain of Custody

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Job Number: JD3298
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/15/20

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD3298-1.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-1.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-1.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-1.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-2.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-2.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-2.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-2.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-3.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-3.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-3.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-3.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-4.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-4.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-4.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-4.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-5.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-5.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-5.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-5.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-6.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-6.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-6.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-6.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-6.2	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-6.2	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-6.2	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-6.2	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-6.3	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-6.3	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-6.3	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-6.3	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-7.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-7.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-7.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-7.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage

SGS Internal Chain of Custody

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Job Number: JD3298
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/15/20

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD3298-8.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-8.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-8.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-8.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-9.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-9.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-9.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-9.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-10.1	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-10.1	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-10.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-10.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-11.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-11.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-11.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-11.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-12.6	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-12.6	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-12.6	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-12.6	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-12.7	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-12.7	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-12.7	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-12.7	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-12.9	Secured Storage	Edward Durner	02/18/20 14:37	Retrieve from Storage
JD3298-12.9	Edward Durner	GCMS2E	02/18/20 14:37	Load on Instrument
JD3298-12.9	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-12.9	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-14.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-14.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-14.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-14.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-15.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-15.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-15.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument

SGS Internal Chain of Custody

Page 3 of 3

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 02/15/20

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD3298-15.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-16.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-16.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-16.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-16.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-17.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-17.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-17.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-17.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-18.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-18.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-18.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-18.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-19.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-19.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-19.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-19.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage
JD3298-20.1	Secured Storage	Edward Durner	02/19/20 15:31	Retrieve from Storage
JD3298-20.1	Edward Durner	GCMS2E	02/19/20 15:32	Load on Instrument
JD3298-20.1	GCMS2E	Edward Durner	02/20/20 12:37	Unload from Instrument
JD3298-20.1	Edward Durner	Secured Storage	02/20/20 12:38	Return to Storage

MS Volatiles**QC Data Summaries**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports



Method Blank Summary

Job Number: JD3298
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2E8003-MB	2E159600.D	1	02/18/20	ED	n/a	n/a	V2E8003

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3298-1, JD3298-2, JD3298-3, JD3298-4, JD3298-5, JD3298-7, JD3298-8, JD3298-9, JD3298-10, JD3298-12

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	106%
17060-07-0	1,2-Dichloroethane-D4	109%
2037-26-5	Toluene-D8	94%
460-00-4	4-Bromofluorobenzene	99%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2E8004-MB	2E159625.D	1	02/19/20	ED	n/a	n/a	V2E8004

The QC reported here applies to the following samples:**Method: SW846 8260C**

JD3298-6, JD3298-11, JD3298-14, JD3298-15, JD3298-16, JD3298-17, JD3298-18, JD3298-19, JD3298-20

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104%
17060-07-0	1,2-Dichloroethane-D4	107%
2037-26-5	Toluene-D8	94%
460-00-4	4-Bromofluorobenzene	101%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2E8003-BS	2E159598.D	1	02/18/20	ED	n/a	n/a	V2E8003

The QC reported here applies to the following samples:**Method:** SW846 8260C

JD3298-1, JD3298-2, JD3298-3, JD3298-4, JD3298-5, JD3298-7, JD3298-8, JD3298-9, JD3298-10, JD3298-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	48.3	97	79-120
107-06-2	1,2-Dichloroethane	50	51.3	103	78-126
75-35-4	1,1-Dichloroethene	50	44.7	89	69-126
156-59-2	cis-1,2-Dichloroethene	50	49.7	99	80-120
156-60-5	trans-1,2-Dichloroethene	50	47.8	96	76-120
100-41-4	Ethylbenzene	50	49.0	98	80-120
75-09-2	Methylene chloride	50	47.6	95	77-120
127-18-4	Tetrachloroethene	50	49.4	99	70-131
108-88-3	Toluene	50	48.8	98	80-120
71-55-6	1,1,1-Trichloroethane	50	52.0	104	81-128
79-00-5	1,1,2-Trichloroethane	50	50.6	101	83-118
79-01-6	Trichloroethene	50	51.0	102	80-120
75-01-4	Vinyl chloride	50	41.3	83	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	81-124%
2037-26-5	Toluene-D8	94%	80-120%
460-00-4	4-Bromofluorobenzene	98%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2E8004-BS	2E159623.D	1	02/19/20	ED	n/a	n/a	V2E8004

The QC reported here applies to the following samples:**Method:** SW846 8260C

JD3298-6, JD3298-11, JD3298-14, JD3298-15, JD3298-16, JD3298-17, JD3298-18, JD3298-19, JD3298-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	51.8	104	79-120
107-06-2	1,2-Dichloroethane	50	54.3	109	78-126
75-35-4	1,1-Dichloroethene	50	49.7	99	69-126
156-59-2	cis-1,2-Dichloroethene	50	53.7	107	80-120
156-60-5	trans-1,2-Dichloroethene	50	52.5	105	76-120
100-41-4	Ethylbenzene	50	53.1	106	80-120
75-09-2	Methylene chloride	50	50.2	100	77-120
127-18-4	Tetrachloroethene	50	55.4	111	70-131
108-88-3	Toluene	50	52.8	106	80-120
71-55-6	1,1,1-Trichloroethane	50	56.8	114	81-128
79-00-5	1,1,2-Trichloroethane	50	52.4	105	83-118
79-01-6	Trichloroethene	50	55.3	111	80-120
75-01-4	Vinyl chloride	50	43.5	87	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	81-124%
2037-26-5	Toluene-D8	94%	80-120%
460-00-4	4-Bromofluorobenzene	99%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD3298-12MS	2E159608.D	1	02/18/20	ED	n/a	n/a	V2E8003
JD3298-12MSD	2E159609.D	1	02/18/20	ED	n/a	n/a	V2E8003
JD3298-12	2E159604.D	1	02/18/20	ED	n/a	n/a	V2E8003

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3298-1, JD3298-2, JD3298-3, JD3298-4, JD3298-5, JD3298-7, JD3298-8, JD3298-9, JD3298-10, JD3298-12

CAS No.	Compound	JD3298-12		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	0.62	J	50	51.1	101	50	51.6	102	1	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	49.8	100	50	49.9	100	0	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	55.1	110	50	56.4	113	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	51.7	103	50	52.6	105	2	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	53.3	107	50	54.5	109	2	70-126/11
100-41-4	Ethylbenzene	ND		50	50.8	102	50	51.2	102	1	51-140/20
75-09-2	Methylene chloride	ND		50	49.3	99	50	50.3	101	2	73-125/13
127-18-4	Tetrachloroethene	ND		50	54.9	110	50	54.3	109	1	61-139/11
108-88-3	Toluene	ND		50	50.6	101	50	50.4	101	0	60-135/10
71-55-6	1,1,1-Trichloroethane	ND		50	56.3	113	50	56.6	113	1	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	48.4	97	50	48.6	97	0	78-121/11
79-01-6	Trichloroethene	ND		50	53.7	107	50	53.7	107	0	62-141/10
75-01-4	Vinyl chloride	ND		50	56.7	113	50	53.0	106	7	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD3298-12	Limits
1868-53-7	Dibromofluoromethane	103%	104%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	108%	81-124%
2037-26-5	Toluene-D8	94%	94%	94%	80-120%
460-00-4	4-Bromofluorobenzene	98%	98%	99%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD3298-6MS	2E159630.D	1	02/19/20	ED	n/a	n/a	V2E8004
JD3298-6MSD	2E159631.D	1	02/19/20	ED	n/a	n/a	V2E8004
JD3298-6	2E159626.D	1	02/19/20	ED	n/a	n/a	V2E8004

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3298-6, JD3298-11, JD3298-14, JD3298-15, JD3298-16, JD3298-17, JD3298-18, JD3298-19, JD3298-20

CAS No.	Compound	JD3298-6		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	ND		50	49.6	99	50	48.8	98	2	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	50.3	101	50	49.1	98	2	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	53.4	107	50	52.0	104	3	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	51.3	103	50	49.9	100	3	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	53.2	106	50	52.2	104	2	70-126/11
100-41-4	Ethylbenzene	ND		50	50.4	101	50	49.8	100	1	51-140/20
75-09-2	Methylene chloride	ND		50	48.2	96	50	46.9	94	3	73-125/13
127-18-4	Tetrachloroethene	0.94	J	50	54.4	107	50	52.9	104	3	61-139/11
108-88-3	Toluene	ND		50	50.0	100	50	48.7	97	3	60-135/10
71-55-6	1,1,1-Trichloroethane	0.74	J	50	56.0	111	50	54.4	107	3	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	48.2	96	50	47.9	96	1	78-121/11
79-01-6	Trichloroethene	ND		50	52.2	104	50	51.3	103	2	62-141/10
75-01-4	Vinyl chloride	ND		50	54.5	109	50	51.2	102	6	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD3298-6	Limits
1868-53-7	Dibromofluoromethane	104%	103%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	106%	109%	81-124%
2037-26-5	Toluene-D8	93%	94%	94%	80-120%
460-00-4	4-Bromofluorobenzene	96%	97%	101%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V2E6949-BFB	Injection Date:	10/09/19
Lab File ID:	2E156547.D	Injection Time:	14:58
Instrument ID:	GCMS2E		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16804	17.3	Pass
75	30.0 - 60.0% of mass 95	44533	45.9	Pass
95	Base peak, 100% relative abundance	97061	100.0	Pass
96	5.0 - 9.0% of mass 95	6930	7.14	Pass
173	Less than 2.0% of mass 174	530	0.55	(0.71) ^a Pass
174	50.0 - 120.0% of mass 95	74171	76.4	Pass
175	5.0 - 9.0% of mass 174	5280	5.44	(7.12) ^a Pass
176	95.0 - 101.0% of mass 174	72867	75.1	(98.2) ^a Pass
177	5.0 - 9.0% of mass 176	5060	5.21	(6.94) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2E6949-IC6949	2E156548.D	10/09/19	15:27	00:29	Initial cal 0.2
V2E6949-IC6949	2E156549.D	10/09/19	15:58	01:00	Initial cal 0.5
V2E6949-IC6949	2E156550.D	10/09/19	16:29	01:31	Initial cal 1
V2E6949-IC6949	2E156551.D	10/09/19	16:59	02:01	Initial cal 2
V2E6949-IC6949	2E156552.D	10/09/19	17:29	02:31	Initial cal 4
V2E6949-IC6949	2E156553.D	10/09/19	18:00	03:02	Initial cal 8
V2E6949-IC6949	2E156554.D	10/09/19	18:30	03:32	Initial cal 20
V2E6949-ICC6949	2E156555.D	10/09/19	19:00	04:02	Initial cal 50
V2E6949-IC6949	2E156556.D	10/09/19	19:30	04:32	Initial cal 100
V2E6949-IC6949	2E156557.D	10/09/19	20:00	05:02	Initial cal 200
V2E6949-ICV6949	2E156560.D	10/09/19	21:32	06:34	Initial cal verification 50
V2E6949-ICV6949	2E156561.D	10/09/19	22:02	07:04	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V2E6949-BFB2	Injection Date:	10/10/19
Lab File ID:	2E156563.D	Injection Time:	08:55
Instrument ID:	GCMS2E		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16357	16.8	Pass
75	30.0 - 60.0% of mass 95	45229	46.5	Pass
95	Base peak, 100% relative abundance	97245	100.0	Pass
96	5.0 - 9.0% of mass 95	6619	6.81	Pass
173	Less than 2.0% of mass 174	588	0.60	(0.80) ^a Pass
174	50.0 - 120.0% of mass 95	73472	75.6	Pass
175	5.0 - 9.0% of mass 174	5514	5.67	(7.50) ^a Pass
176	95.0 - 101.0% of mass 174	70725	72.7	(96.3) ^a Pass
177	5.0 - 9.0% of mass 176	4868	5.01	(6.88) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2E6949-ICV6949	2E156566.D	10/10/19	11:06	02:11	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2E8003-BFB
Lab File ID: 2E159597.D
Instrument ID: GCMS2E

Injection Date: 02/18/20
Injection Time: 07:21

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	18757	17.4	Pass
75	30.0 - 60.0% of mass 95	51328	47.7	Pass
95	Base peak, 100% relative abundance	107653	100.0	Pass
96	5.0 - 9.0% of mass 95	7418	6.89	Pass
173	Less than 2.0% of mass 174	172	0.16	(0.20) ^a Pass
174	50.0 - 120.0% of mass 95	85208	79.2	Pass
175	5.0 - 9.0% of mass 174	6703	6.23	(7.87) ^a Pass
176	95.0 - 101.0% of mass 174	82576	76.7	(96.9) ^a Pass
177	5.0 - 9.0% of mass 176	5368	4.99	(6.50) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2E8003-CC6949	2E159597.D	02/18/20	07:21	00:00	Continuing cal 20
V2E8002-BS2	2E159598.A.D	02/18/20	07:59	00:38	Blank Spike
V2E8003-BS	2E159598.D	02/18/20	07:59	00:38	Blank Spike
V2E8002-MB2	2E159600A.D	02/18/20	09:00	01:39	Method Blank
V2E8003-MB	2E159600.D	02/18/20	09:00	01:39	Method Blank
JD3297-3MS	2E159601.D	02/18/20	09:40	02:19	Matrix Spike
JD3297-5DUP	2E159603.D	02/18/20	10:41	03:20	Duplicate
JD3298-12	2E159604.D	02/18/20	11:12	03:51	HSSER-GMZ02-021320
ZZZZZZ	2E159606.D	02/18/20	12:09	04:48	(unrelated sample)
JD3298-12MS	2E159608.D	02/18/20	13:10	05:49	Matrix Spike
JD3298-12MSD	2E159609.D	02/18/20	13:41	06:20	Matrix Spike Duplicate
ZZZZZZ	2E159611.D	02/18/20	14:42	07:21	(unrelated sample)
JD3298-1	2E159612.D	02/18/20	15:13	07:52	HSSER-SMW01-021220
JD3298-2	2E159613.D	02/18/20	15:44	08:23	HSSER-SMW08-021220
JD3298-3	2E159614.D	02/18/20	16:15	08:54	HSSER-FBLK01-021220
JD3298-4	2E159615.D	02/18/20	16:45	09:24	HSSER-SMW02-021220
JD3298-5	2E159616.D	02/18/20	17:16	09:55	HSSER-GMZ01-021220
JD3298-7	2E159617.D	02/18/20	17:46	10:25	HSSER-SMW19-021220
JD3298-8	2E159618.D	02/18/20	18:17	10:56	HSSER-GMZ04-021220
JD3298-9	2E159619.D	02/18/20	18:47	11:26	HSSER-SMW21-021220
JD3298-10	2E159620.D	02/18/20	19:18	11:57	HSSER-SMW20-021320

Instrument Performance Check (BFB)

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V2E8004-BFB	Injection Date:	02/19/20
Lab File ID:	2E159622.D	Injection Time:	07:16
Instrument ID:	GCMS2E		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	19477	18.2	Pass
75	30.0 - 60.0% of mass 95	50689	47.4	Pass
95	Base peak, 100% relative abundance	107029	100.0	Pass
96	5.0 - 9.0% of mass 95	7476	6.99	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	87256	81.5	Pass
175	5.0 - 9.0% of mass 174	6463	6.04	(7.41) ^a Pass
176	95.0 - 101.0% of mass 174	84264	78.7	(96.6) ^a Pass
177	5.0 - 9.0% of mass 176	5816	5.43	(6.90) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2E8004-CC6949	2E159622.D	02/19/20	07:16	00:00	Continuing cal 20
V2E8004-BS	2E159623.D	02/19/20	07:54	00:38	Blank Spike
V2E8004-MB	2E159625.D	02/19/20	08:55	01:39	Method Blank
JD3298-6	2E159626.D	02/19/20	09:31	02:15	HSSER-MW07FGA-021220
JD3298-17	2E159627.D	02/19/20	10:01	02:45	HSSER-MW203-021320
JD3298-11	2E159628.D	02/19/20	10:32	03:16	HSSER-GMZ03-021320
ZZZZZZ	2E159629.D	02/19/20	11:03	03:47	(unrelated sample)
JD3298-6MS	2E159630.D	02/19/20	11:33	04:17	Matrix Spike
JD3298-6MSD	2E159631.D	02/19/20	12:04	04:48	Matrix Spike Duplicate
JD3298-20	2E159633.D	02/19/20	13:04	05:48	HSSER-TBLK01-021220
ZZZZZZ	2E159634.D	02/19/20	13:35	06:19	(unrelated sample)
ZZZZZZ	2E159635.D	02/19/20	14:05	06:49	(unrelated sample)
ZZZZZZ	2E159636.D	02/19/20	14:36	07:20	(unrelated sample)
JD3298-14	2E159637.D	02/19/20	15:06	07:50	HSSER-PMW01-021320
JD3298-15	2E159638.D	02/19/20	15:37	08:21	HSSER-PMW02-021320
JD3298-16	2E159639.D	02/19/20	16:07	08:51	HSSER-EBLK01-021320
JD3298-18	2E159640.D	02/19/20	16:37	09:21	HSSER-DUP01-021320
JD3298-19	2E159641.D	02/19/20	17:08	09:52	HSSER-SMW04-021420
ZZZZZZ	2E159642.D	02/19/20	17:39	10:23	(unrelated sample)
ZZZZZZ	2E159643.D	02/19/20	18:09	10:53	(unrelated sample)
ZZZZZZ	2E159644.D	02/19/20	18:40	11:24	(unrelated sample)
ZZZZZZ	2E159645.D	02/19/20	19:11	11:55	(unrelated sample)

Internal Standard Area Summary

Page 1 of 1

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2E8003-CC6949	Injection Date:	02/18/20
Lab File ID:	2E159597.D	Injection Time:	07:21
Instrument ID:	GCMS2E	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	124708	7.32	291067	9.55	451904	10.47
Upper Limit ^a	249416	7.82	582134	10.05	903808	10.97
Lower Limit ^b	62354	6.82	145534	9.05	225952	9.97

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
V2E8003-BS	129674	7.32	306439	9.55	478328	10.47
V2E8002-BS2	129674	7.32	306439	9.55	478328	10.47
V2E8002-MB2	141842	7.32	297487	9.55	465764	10.47
V2E8003-MB	141842	7.32	297487	9.55	465764	10.47
JD3297-3MS	111751	7.32	308172	9.55	480471	10.47
JD3297-5DUP	115192	7.32	310245	9.55	479183	10.47
JD3298-12	117908	7.33	302958	9.55	471309	10.47
ZZZZZZ	169339	7.32	316193	9.55	493989	10.47
JD3298-12MS	137022	7.32	310080	9.55	482979	10.47
JD3298-12MSD	133528	7.33	309423	9.55	482788	10.47
ZZZZZZ	155838	7.33	311441	9.55	479623	10.47
JD3298-1	123180	7.32	308034	9.55	474852	10.47
JD3298-2	122308	7.32	300711	9.55	468212	10.47
JD3298-3	130155	7.32	303134	9.55	468384	10.47
JD3298-4	131342	7.32	299616	9.55	463603	10.47
JD3298-5	130418	7.32	288550	9.55	450095	10.47
JD3298-7	127036	7.33	277324	9.55	436986	10.47
JD3298-8	129162	7.32	284905	9.55	442286	10.47
JD3298-9	131381	7.32	303509	9.55	471643	10.47
JD3298-10	127963	7.33	281022	9.55	441887	10.47

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2E8004-CC6949	Injection Date:	02/19/20
Lab File ID:	2E159622.D	Injection Time:	07:16
Instrument ID:	GCMS2E	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	133762	7.33	294730	9.55	456192	10.47
Upper Limit ^a	267524	7.83	589460	10.05	912384	10.97
Lower Limit ^b	66881	6.83	147365	9.05	228096	9.97

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
V2E8004-BS	132086	7.32	301821	9.55	469821	10.47
V2E8004-MB	132391	7.32	301888	9.55	469013	10.47
JD3298-6	121877	7.32	294309	9.55	457845	10.47
JD3298-17	124538	7.32	300977	9.55	462612	10.47
JD3298-11	125579	7.33	294158	9.55	457659	10.47
ZZZZZZ	173752	7.32	286911	9.55	452312	10.47
JD3298-6MS	117962	7.33	298917	9.55	466212	10.47
JD3298-6MSD	124544	7.32	308046	9.55	482103	10.47
JD3298-20	124492	7.33	295085	9.55	456952	10.47
ZZZZZZ	125856	7.32	293577	9.55	454437	10.47
ZZZZZZ	126464	7.33	300389	9.55	465782	10.47
ZZZZZZ	126911	7.33	289549	9.55	446666	10.47
JD3298-14	123439	7.32	292851	9.55	452119	10.47
JD3298-15	122725	7.32	280522	9.55	440454	10.47
JD3298-16	132929	7.33	300496	9.55	466424	10.47
JD3298-18	127887	7.32	294369	9.55	453298	10.47
JD3298-19	129597	7.32	289884	9.55	448821	10.47
ZZZZZZ	121317	7.32	258068	9.55	410111	10.47
ZZZZZZ	126988	7.32	280212	9.55	437926	10.47
ZZZZZZ	132732	7.32	290332	9.55	451476	10.47
ZZZZZZ	134890	7.33	312008	9.55	478188	10.47

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Page 1 of 1

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD3298-1	2E159612.D	102	106	93	99
JD3298-2	2E159613.D	104	109	93	101
JD3298-3	2E159614.D	103	108	93	100
JD3298-4	2E159615.D	103	109	94	101
JD3298-5	2E159616.D	105	109	94	102
JD3298-6	2E159626.D	105	109	94	101
JD3298-7	2E159617.D	106	111	94	101
JD3298-8	2E159618.D	107	110	94	102
JD3298-9	2E159619.D	105	109	95	100
JD3298-10	2E159620.D	108	111	94	101
JD3298-11	2E159628.D	105	107	93	101
JD3298-12	2E159604.D	105	108	94	99
JD3298-14	2E159637.D	105	111	95	99
JD3298-15	2E159638.D	107	111	94	99
JD3298-16	2E159639.D	106	110	94	101
JD3298-17	2E159627.D	104	109	93	99
JD3298-18	2E159640.D	105	111	94	98
JD3298-19	2E159641.D	107	112	93	102
JD3298-20	2E159633.D	103	108	93	100
JD3298-12MS	2E159608.D	103	103	94	98
JD3298-12MSD	2E159609.D	104	104	94	98
JD3298-6MS	2E159630.D	104	105	93	96
JD3298-6MSD	2E159631.D	103	106	94	97
V2E8003-BS	2E159598.D	104	106	94	98
V2E8003-MB	2E159600.D	106	109	94	99
V2E8004-BS	2E159623.D	103	106	94	99
V2E8004-MB	2E159625.D	104	107	94	101

Surrogate
Compounds

Recovery
Limits

S1 = Dibromofluoromethane

80-120%

S2 = 1,2-Dichloroethane-D4

81-124%

S3 = Toluene-D8

80-120%

S4 = 4-Bromofluorobenzene

80-120%

6.6.1
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Initial Calibration Summary

Page 1 of 5

Job Number: JD3298

Sample: V2E6949-ICC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156555.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report VOAMS2E

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
Last Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration

Calibration Files

4	=2E156552.D	2	=2E156551.D	0.5	=2E156549.D	50	=2E156555.D
100	=2E156556.D	1	=2E156550.D	200	=2E156557.D	20	=2E156554.D
8	=2E156553.D	0.2	=2E156548.D		=		=

Compound

	4	2	0.5	50	100	1	200	20	8	0.2	Avg	%RSD
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1) I tert butyl alcohol-d9	-----ISTD-----										
2) ethanol	0.138	0.140	0.134	0.129	0.160	0.129	0.131	0.127	0.136	7.98	
3) tertiary butyl alcohol	1.251	1.321	1.401	1.435	1.316	1.388	1.274	1.282	1.333	5.01	
4) 1,4-dioxane	0.113	0.116	0.114	0.106		0.108	0.110	0.108	0.111	3.34	
5) I pentafluorobenzene	-----ISTD-----										
6) chlorodifluoromethane	0.827	0.826	0.851	0.851	0.858	0.933	0.780	0.804	0.847	0.842	5.06
7) dichlorodifluoromethane	0.624	0.643	0.681	0.668	0.558	0.641	0.611	0.665	0.636	6.18	
8) chloromethane	0.832	0.897	0.956	0.878	0.870	0.983	0.816	0.809	0.864	0.878	6.76
9) vinyl chloride	0.811	0.863	0.840	0.903	0.911	0.876	0.848	0.826	0.860	0.865	4.16
10) bromomethane	0.470	0.534	0.504	0.526	0.562		0.476	0.513	0.512	6.33	
11) chloroethane	0.432	0.449	0.463	0.450	0.462	0.486	0.427	0.423	0.436	0.448	4.54
12) trichlorofluoromethane	0.728	0.752	0.571	0.770	0.777	0.715	0.743	0.698	0.763	0.724	8.69
13) 1,3-butadiene	0.565	0.566	0.565	0.612	0.626	0.607	0.578	0.559	0.592	0.586	4.21
14) vinyl bromide	0.394	0.440	0.398	0.424	0.441	0.414	0.421	0.391	0.415	0.446	4.76
15) ethyl ether	0.303	0.324	0.333	0.305	0.313	0.327	0.313	0.292	0.306	0.313	4.19
16) 2-chloropropane	0.947	1.074	0.964	0.963	1.147	0.920	0.891	0.966	0.984	8.57	
17) acrolein	0.096		0.099	0.103		0.098	0.102	0.100	0.099	2.63	
18) freon 113	0.360	0.364	0.382	0.405	0.331	0.406	0.362	0.392	0.375	6.85	
19) 1,1-dichloroethene	0.759	0.753	0.790	0.780	0.798	0.791	0.766	0.735	0.759	0.763	2.58
20) acetone	0.146	0.146	0.135	0.128	0.205	0.126	0.133	0.138	0.145	17.52	
21) acetonitrile	0.085		0.067	0.062		0.061	0.066	0.065	0.068	12.97	
22) iodomethane	0.602	0.615	0.615	0.621	0.651	0.652	0.643	0.589	0.617	0.623	3.50
23) carbon disulfide											

6.7.1
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Initial Calibration Summary**Job Number:** JD3298**Sample:** V2E6949-ICC6949**Account:** UTC United Technologies Corporation**Lab FileID:** 2E156555.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

24)	methylene chloride	1.309 1.332 1.396 1.377 1.428 1.452 1.367 1.297 1.353 1.468	1.378	4.23
		0.559 0.570 0.519 0.536 0.673 0.522 0.502 0.519	0.550	9.92
25)	methyl acetate	0.380 0.371 0.370 0.366	0.361 0.360 0.368	0.368 1.89
26)	methyl tert butyl ether	1.444 1.438 1.585 1.455 1.480 1.564 1.433 1.399 1.410 1.734	1.494	6.98
27)	trans-1,2-dichloroethene	0.685 0.700 0.725 0.723 0.738 0.764 0.707 0.684 0.718	0.716	3.57
28)	hexane	0.374 0.392 0.302 0.416 0.423 0.401 0.418 0.383 0.427	0.393	9.83
29)	di-isopropyl ether	1.856 1.788 1.966 1.945 1.964 2.121 1.859 1.853 1.859 2.073	1.928	5.50
30)	ethyl tert-butyl ether	1.633 1.639 1.706 1.708 1.727 1.801 1.653 1.632 1.660 1.609	1.677	3.47
31)	2-butanone	0.054 0.045 0.056 0.054 0.041 0.053 0.053 0.053	0.051	10.41
32)	1,1-dichloroethane	0.946 0.962 1.014 0.961 0.966 1.011 0.921 0.923 0.968 0.889	0.956	4.05
33)	chloroprene	0.750 0.781 0.791 0.797 0.812 0.811 0.777 0.738 0.752 0.803	0.781	3.42
34)	acrylonitrile	0.193 0.196 0.184 0.189 0.184 0.192 0.182 0.185 0.181	0.187	2.85
35)	vinyl acetate	0.105 0.102 0.118 0.117 0.080 0.112 0.108 0.108	0.106	11.33
36)	ethyl acetate	0.086 0.090 0.079 0.077 0.089 0.072 0.083 0.089	0.083	7.99
37)	2,2-dichloropropane	0.794 0.850 0.926 0.798 0.803 0.965 0.751 0.762 0.804	0.828	8.81
38)	cis-1,2-dichloroethene	0.563 0.573 0.623 0.568 0.583 0.665 0.564 0.549 0.568	0.584	6.28
39)	propionitrile	0.069 0.065 0.061 0.071 0.067 0.069 0.066 0.070 0.069	0.067	4.60
40)	methyl acrylate	0.064 0.071 0.073	0.071 0.066 0.061	0.068 7.21
41)	bromochloromethane	0.273 0.260 0.275 0.262 0.273 0.269 0.266 0.253 0.263	0.266	2.66
42)	tetrahydrofuran	0.069 0.077 0.065 0.063	0.061 0.063 0.068	0.066 7.93
43)	chloroform	0.888 0.886 0.987 0.865 0.888 0.954 0.853 0.829 0.881	0.892	5.49
44)	t-butyl formate	0.510 0.488 0.515 0.525 0.526 0.574 0.501 0.512 0.505	0.518	4.67
45)	1,1-dichloropropene	0.695 0.697 0.761 0.724 0.736 0.737 0.710 0.679 0.698	0.715	3.64
46)	carbon tetrachloride	0.654 0.659 0.679 0.684 0.708 0.701 0.683 0.643 0.672 0.690	0.677	3.04
47)	isopropyl acetate	0.122 0.107 0.118 0.122	0.120 0.114 0.114	0.117 4.76
48)	dibromofluoromethane (s)	0.443 0.447 0.429 0.445 0.450 0.445 0.449 0.444 0.442 0.431	0.442	1.59
49)	methacrylonitrile	0.186 0.177 0.200 0.201 0.164 0.198 0.190 0.184	0.187	6.71
50)	1,1,1-trichloroethane	0.767 0.768 0.802 0.787 0.820 0.834 0.783 0.754 0.796 0.830	0.794	3.48
51)	cyclohexane	0.767 0.833 0.849 0.851 0.749 0.827 0.768 0.847	0.811	5.24
52)	iso-butyl alcohol	0.024 0.022 0.020	0.019 0.022 0.020	0.021 8.48
53)	tert amyl alcohol			

6.7.1
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Initial Calibration Summary**Job Number:** JD3298**Sample:** V2E6949-ICC6949**Account:** UTC United Technologies Corporation**Lab FileID:** 2E156555.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

0.033	0.028	0.025	0.024	0.028	0.030	0.028	11.05
-----ISTD-----							
54) I 1,4-difluorobenzene							
55) 1,2-dichloroethane-d4 (s)	0.305	0.307	0.302	0.300	0.291	0.309	0.293
	0.296	0.300	0.297	0.296	0.309	0.297	0.301
56) 2,2,4-trimethylpentane	0.975	1.016	1.123	1.136	1.003	1.143	1.013
	1.146						1.069
57) n-butyl alcohol	0.009	0.008	0.010	0.008	0.008	0.009	0.008
							0.009#
58) benzene	1.374	1.388	1.513	1.370	1.390	1.530	1.339
	1.310	1.362	1.724	1.430	1.362	1.724	1.430
59) tert-amyl methyl ether	1.065	1.072	1.198	1.070	1.072	1.140	1.031
	1.017	1.040	1.335	1.104	1.017	1.040	1.335
60) heptane *This compound does not meet Initial Calibration criteria*	0.220	0.231	0.262	0.263	0.210	0.265	0.238
							0.267
61) 1,2-dichloroethane	0.424	0.436	0.409	0.404	0.500	0.385	0.401
							0.415
62) ethyl acrylate	0.366	0.356	0.402	0.396	0.347	0.392	0.375
							0.374
63) trichloroethene	0.322	0.326	0.317	0.329	0.337	0.308	0.327
							0.308
64) 2-nitropropane	0.103		0.109	0.101		0.099	0.102
							0.103
65) 2-chloroethyl vinyl ether	0.196	0.190	0.182	0.210	0.209	0.200	0.204
							0.199
66) methyl methacrylate	0.074	0.075	0.084	0.087		0.087	0.079
							0.078
67) 1,2-dichloropropane	0.353	0.341	0.359	0.364	0.366	0.403	0.354
							0.349
68) methylcyclohexane	0.539	0.556	0.620	0.635	0.562	0.633	0.567
							0.626
69) dibromomethane	0.182	0.187	0.187	0.191	0.193	0.209	0.191
							0.184
70) bromodichloromethane	0.407	0.402	0.416	0.433	0.442	0.444	0.434
							0.408
71) epichlorohydrin	0.031	0.029	0.031	0.030	0.030	0.030	0.029
							0.029
72) cis-1,3-dichloropropene	0.551	0.546	0.521	0.574	0.582	0.560	0.571
							0.539
73) 4-methyl-2-pentanone	0.119	0.109	0.108	0.124	0.122	0.111	0.118
							0.119
74) 3-methyl-1-butanol	0.009	0.008	0.010	0.009		0.008	0.010
							0.009
							#
75) I chlorobenzene-d5							
76) toluene-d8 (s)	1.403	1.384	1.395	1.379	1.365	1.379	1.353
							1.378
77) toluene	1.022	0.961	1.102	1.011	1.025	1.030	0.988
							0.951
							0.996
78) ethyl methacrylate	0.446	0.415	0.402	0.497	0.499	0.433	0.487
							0.456
79) trans-1,3-dichloropropene	0.568	0.538	0.520	0.596	0.598	0.540	0.574
							0.566
							0.563
80) 1,1,2-trichloroethane	0.296	0.289	0.296	0.284	0.286	0.271	0.276
							0.275
81) tetrachloroethene	0.319	0.311	0.349	0.323	0.329	0.354	0.319
							0.310
82) 2-hexanone	0.132	0.120	0.106	0.142	0.136	0.115	0.129
							0.133
83) 1,3-dichloropropane	0.130	0.105	0.130	0.115	0.129	0.133	0.130
							0.105
							0.125
							10.15

6.7.1
6

Initial Calibration Summary**Job Number:** JD3298**Sample:** V2E6949-ICC6949**Account:** UTC United Technologies Corporation**Lab FileID:** 2E156555.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

84)	butyl acetate	0.616 0.590 0.589 0.594 0.590 0.627 0.565 0.571 0.582 0.630 0.596 3.74 0.245 0.224 0.268 0.262 0.265 0.253 0.254 0.260 0.254 5.61
85)	dibromochloromethane	0.354 0.337 0.397 0.380 0.397 0.357 0.388 0.359 0.355 0.327 0.365 6.73
86)	1,2-dibromoethane	0.367 0.343 0.353 0.377 0.385 0.381 0.371 0.362 0.365 0.309 0.361 6.16
87)	n-butyl ether	1.757 1.717 1.771 1.863 1.864 1.872 1.792 1.715 1.746 1.664 1.776 4.02
88)	chlorobenzene	1.069 1.046 1.103 1.069 1.094 1.055 1.066 1.026 1.044 1.107 1.068 2.51
89)	1,1,1,2-tetrachloroethane	0.384 0.375 0.366 0.390 0.399 0.381 0.392 0.377 0.375 0.371 0.381 2.67
90)	ethylbenzene	1.855 1.799 1.936 1.861 1.898 1.842 1.813 1.759 1.825 1.937 1.853 3.13
91)	m,p-xylene	0.704 0.714 0.715 0.726 0.743 0.714 0.713 0.689 0.709 0.759 0.719 2.78
92)	o-xylene	1.499 1.451 1.538 1.508 1.514 1.531 1.456 1.434 1.456 1.558 1.495 2.85
93)	styrene	1.085 1.050 1.026 1.201 1.226 1.068 1.191 1.107 1.119 1.069 1.114 6.21
94)	butyl acrylate	0.672 0.625 0.628 0.776 0.779 0.657 0.758 0.714 0.685 0.533 0.683 11.35
95)	bromoform	0.210 0.211 0.197 0.236 0.248 0.195 0.250 0.226 0.222 0.222 9.13
96)	isopropylbenzene	1.796 1.787 1.789 1.879 1.893 1.834 1.834 1.773 1.803 1.976 1.836 3.44
97)	cis-1,4-dichloro-2-butene	0.153 0.139 0.171 0.169 0.170 0.154 0.148 0.158 7.95
98)	I 1,4-dichlorobenzene-d -----ISTD-----	
99)	4-bromofluorobenzene (s)	0.970 0.965 0.980 0.974 0.975 0.983 0.953 0.987 0.977 0.986 0.975 1.06
100)	bromobenzene	0.859 0.863 0.841 0.874 0.894 0.913 0.870 0.851 0.854 0.934 0.875 3.38
101)	1,1,2,2-tetrachloroethane	0.862 0.795 0.794 0.869 0.858 0.947 0.834 0.848 0.826 0.797 0.843 5.47
102)	trans-1,4-dichloro-2-butene	0.215 0.209 0.228 0.226 0.220 0.221 0.211 0.219 3.39
103)	1,2,3-trichloroproppane	0.267 0.244 0.240 0.239 0.259 0.234 0.238 0.247 0.246 4.61
104)	n-propylbenzene	4.047 4.174 4.332 4.279 4.292 4.395 4.090 4.154 4.210 4.573 4.255 3.66
105)	2-chlorotoluene	0.821 0.851 0.917 0.870 0.881 0.862 0.851 0.853 0.870 1.041 0.882 6.93
106)	4-chlorotoluene	2.507 2.477 2.699 2.526 2.546 2.723 2.459 2.472 2.517 2.741 2.567 4.29
107)	1,3,5-trimethylbenzene	2.906 2.916 3.105 3.068 3.114 3.075 2.984 2.919 2.988 3.295 3.037 3.96
108)	tert-butylbenzene	2.542 2.493 2.615 2.657 2.706 2.733 2.644 2.538 2.570 2.588 2.609 2.94
109)	1,2,4-trimethylbenzene	2.922 2.805 3.124 3.079 3.102 3.023 2.999 2.969 3.023 3.101 3.015 3.25
110)	sec-butylbenzene	3.633 3.695 4.011 3.977 4.010 3.991 3.859 3.790 3.801 3.984 3.875 3.61
111)	1,3-dichlorobenzene	1.682 1.623 1.667 1.653 1.688 1.683 1.665 1.617 1.638 1.894 1.681 4.69
112)	p-isopropyltoluene	3.094 3.113 3.220 3.381 3.413 3.336 3.300 3.223 3.264 3.562 3.291 4.30
113)	1,4-dichlorobenzene	

Initial Calibration Summary**Job Number:** JD3298**Sample:** V2E6949-ICC6949**Account:** UTC United Technologies Corporation**Lab FileID:** 2E156555.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

114)	1,2-dichlorobenzene	1.657 1.653 1.712 1.693 1.729 1.707 1.706 1.653 1.680 1.858 1.705 3.52
115)	n-butylbenzene	1.642 1.578 1.744 1.645 1.666 1.682 1.640 1.607 1.606 1.904 1.671 5.60
116)	1,2-dibromo-3-chloropropane	1.574 1.589 1.691 1.743 1.758 1.724 1.709 1.662 1.630 1.673 1.675 3.73
117)	1,3,5-trichlorobenzene	0.191 0.179 0.195 0.195 0.198 0.191 0.184 0.184 0.189 0.189 3.54
118)	1,2,4-trichlorobenzene	1.285 1.324 1.341 1.388 1.443 1.373 1.387 1.344 1.341 1.489 1.372 4.34
119)	2-ethylhexyl acrylate	1.169 1.146 1.234 1.241 1.291 1.155 1.234 1.194 1.175 1.353 1.219 5.36
120)	hexachlorobutadiene	0.884 0.956 0.996 0.774 0.710 0.864 13.95
121)	naphthalene	0.519 0.624 0.548 0.602 0.612 0.567 0.592 0.582 0.579 0.580 5.60
122)	1,2,3-trichlorobenzene	2.617 2.585 2.575 2.863 2.880 2.666 2.723 2.799 2.661 2.835 2.720 4.28
123)	hexachloroethane	1.052 1.064 1.148 1.142 1.161 1.113 1.110 1.104 1.089 1.289 1.127 5.92
124)	benzyl chloride	0.438 0.429 0.506 0.536 0.537 0.469 0.447 0.480 9.56
125)	2-methylnaphthalene	1.696 1.657 1.831 1.815 1.813 1.922 1.775 1.744 1.703 1.773 4.64
126)	Bis(chloromethyl)ether	1.304 1.509 1.566 1.512 1.429 1.321 1.440 7.52
127)	Ethylenimine	0.000# -1.00 0.000# -1.00
128)	I pentafluorobenzene(a)	-----ISTD-----
129)	Freon 142B	0.733 0.751 0.790 0.750 0.657 0.680 0.727 6.80
130)	allyl chloride	0.128 0.109 0.092 0.101 0.092 0.098 0.101 0.103 12.05

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2E6949.M

Mon Jan 20 14:47:55 2020

6.7.1
6

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156560.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\V2E6949\2E156560.D Vial: 14
 Acq On : 9 Oct 2019 9:32 pm Operator: roberts
 Sample : icv6949-50 Inst : VOAMS2E
 Misc : MS37796,V2E6949,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 Last Update : Thu Oct 10 15:09:10 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.	
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	101	0.00	7.33
2	ethanol	0.136	0.142	-4.4	107	0.00	6.08
3 M	tertiary butyl alcohol	1.333	1.563	-17.3	113	-0.01	7.44
4	1,4-dioxane	0.111	0.117	-5.4	103	0.00	11.20
5 I	pentafluorobenzene	1.000	1.000	0.0	108	0.00	9.56
6 M	chlorodifluoromethane	0.842	0.916	-8.8	116	-0.01	4.01
7 M	dichlorodifluoromethane	0.636	0.780	-22.6	124	-0.01	3.99
8 M	chloromethane	0.878	1.104	-25.7	136	0.00	4.38
9 M	vinyl chloride	0.865	0.889	-2.8	107	-0.01	4.61
10 M	bromomethane	0.512	0.663	-29.5	142	-0.01	5.24
11 M	chloroethane	0.448	0.441	1.6	106	0.00	5.40
12 M	trichlorofluoromethane	0.724	0.837	-15.6	118	0.00	5.85
13	1,3-butadiene	0.586	0.791	-35.0#	140	0.00	4.64
14	vinyl bromide	0.418	0.473	-13.2	121	0.00	5.74
15 M	ethyl ether	0.313	0.337	-7.7	119	0.00	6.24
16	2-chloropropane	0.984	1.070	-8.7	120	0.00	6.43
17 M	acrolein	0.099	0.098	1.0	107	0.00	6.49
18	freon 113	0.375	0.446	-18.9	126	0.00	6.63
19 M	1,1-dichloroethene	0.769	0.804	-4.6	112	0.00	6.67
20 M	acetone	0.145	0.184	-26.9	148	-0.01	6.70
21	acetonitrile			-----NA-----			
22 M	iodomethane	0.623	0.894	-43.5#	156	0.00	6.94
23 M	carbon disulfide	1.378	1.835	-33.2#	144	0.00	7.07
24 M	methylene chloride	0.550	0.569	-3.5	119	0.00	7.38
25 M	methyl acetate	0.368	0.365	0.8	107	0.00	7.17
26 M	methyl tert butyl ether	1.494	1.549	-3.7	115	0.00	7.70
27 M	trans-1,2-dichloroethene	0.716	0.783	-9.4	117	0.00	7.75
28	hexane	0.393	0.451	-14.8	117	0.00	8.05
29 M	di-isopropyl ether	1.928	1.981	-2.7	110	0.00	8.30
30 M	ethyl tert-butyl ether	1.677	1.819	-8.5	115	0.00	8.76
31 M	2-butanone	0.051	0.068	-33.3#	132	0.00	9.01
32 M	1,1-dichloroethane	0.956	1.038	-8.6	117	0.00	8.31
33 M	chloroprene	0.781	0.886	-13.4	120	0.00	8.42
34 M	acrylonitrile			-----NA-----			
35 M	vinyl acetate	0.106	0.109	-2.8	101	0.00	8.30
36 M	ethyl acetate	0.083	0.078	6.0	107	0.00	9.04
37 M	2,2-dichloropropane	0.828	0.818	1.2	111	0.00	9.05
38 M	cis-1,2-dichloroethene	0.584	0.600	-2.7	114	0.00	9.05
39 M	propionitrile	0.067	0.076	-13.4	116	0.00	9.11
40	methyl acrylate	0.068	0.077	-13.2	118	0.00	9.11
41 M	bromochloromethane	0.266	0.290	-9.0	120	0.00	9.36

Initial Calibration Verification

Page 2 of 3

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156560.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

42 M	tetrahydrofuran	0.066	0.069	-4.5	115	0.00	9.40
43 M	chloroform	0.892	0.934	-4.7	117	0.00	9.41
44	t-butyl formate	0.518	0.388	25.1	80	0.00	9.44
45	1,1-dichloropropene	0.715	0.771	-7.8	115	0.00	9.85
46	carbon tetrachloride	0.677	0.743	-9.7	118	0.00	9.87
47	isopropyl acetate	0.117	0.122	-4.3	111	0.00	10.03
48 S	dibromofluoromethane (s)	0.442	0.447	-1.1	109	0.00	9.61
49 M	methacrylonitrile	0.187	0.219	-17.1	119	0.00	9.30
50 M	1,1,1-trichloroethane	0.794	0.841	-5.9	116	0.00	9.67
51	cyclohexane	0.811	0.926	-14.2	118	0.00	9.74
52	iso-butyl alcohol	0.021	0.022	-4.8	108	0.00	9.85
53	tert amyl alcohol	0.028	0.028	0.0	109	0.00	9.98
54 I	1,4-difluorobenzene	1.000	1.000	0.0	108	0.00	10.48
55 S	1,2-dichloroethane-d4 (s)	0.301	0.297	1.3	107	0.00	10.04
56	2,2,4-trimethylpentane	1.069	1.400	-31.0#	135	0.00	10.10
57 M	n-butyl alcohol	0.009	0.009#	0.0	106	0.00	10.60
58 M	benzene	1.430	1.477	-3.3	116	0.00	10.11
59	tert-amyl methyl ether	1.104	1.102	0.2	111	0.00	10.14
60 M	heptane	0.244	0.330	-35.2#	136	0.00	10.28
61 M	1,2-dichloroethane	0.422	0.425	-0.7	112	0.00	10.13
62	ethyl acrylate	0.376	0.412	-9.6	111	0.00	10.82
63 M	trichloroethene	0.332	0.363	-9.3	119	0.00	10.82
64 M	2-nitropropane	0.103	0.118	-14.6	117	0.00	11.60
65 M	2-chloroethyl vinyl ether	0.199	0.239	-20.1	123	0.00	11.61
66 M	methyl methacrylate	0.081	0.093	-14.8	119	0.00	11.09
67 M	1,2-dichloropropene	0.362	0.386	-6.6	114	0.00	11.09
68 M	methylcyclohexane	0.592	0.652	-10.1	113	0.00	11.04
69 M	dibromomethane	0.190	0.203	-6.8	114	0.00	11.25
70 M	bromodichloromethane	0.423	0.453	-7.1	113	0.00	11.37
71	epichlorohydrin	0.030	0.034	-13.3	117	0.00	11.74
72 M	cis-1,3-dichloropropene	0.553	0.613	-10.8	115	0.00	11.83
73 M	4-methyl-2-pentanone	0.116	0.130	-12.1	113	0.00	11.92
74 M	3-methyl-1-butanol	0.009	0.010#	-11.1	105	0.00	11.94
75 I	chlorobenzene-d5	1.000	1.000	0.0	109	0.00	13.62
76 S	toluene-d8 (s)	1.381	1.356	1.8	107	0.00	12.12
77	toluene	1.020	1.085	-6.4	117	0.00	12.19
78	ethyl methacrylate	0.455	0.536	-17.8	117	0.00	12.37
79	trans-1,3-dichloropropene	0.562	0.642	-14.2	117	0.00	12.39
80	1,1,2-trichloroethane	0.283	0.298	-5.3	114	0.00	12.60
81 M	tetrachloroethene			-----NA-----			
82	2-hexanone	0.125	0.154	-23.2	118	0.00	12.77
83 M	1,3-dichloropropane	0.596	0.632	-6.0	116	0.00	12.78
84 M	butyl acetate	0.254	0.279	-9.8	113	0.00	12.84
85 M	dibromochloromethane	0.365	0.416	-14.0	119	0.00	13.05
86 M	1,2-dibromoethane	0.361	0.404	-11.9	116	0.00	13.19
87	n-butyl ether	1.776	2.018	-13.6	118	0.00	13.56
88 M	chlorobenzene	1.068	1.168	-9.4	119	0.00	13.65
89 M	1,1,1,2-tetrachloroethane	0.381	0.421	-10.5	117	0.00	13.71
90 M	ethylbenzene	1.853	1.989	-7.3	116	0.00	13.71
91 M	m,p-xylene	0.719	0.785	-9.2	118	0.00	13.81
92 M	o-xylene	1.495	1.596	-6.8	115	0.00	14.23
93 M	styrene	1.114	1.285	-15.4	116	0.00	14.24
94	butyl acrylate	0.683	0.807	-18.2	113	0.00	14.05
95 M	bromoform	0.222	0.275	-23.9	127	0.00	14.50
96	isopropylbenzene	1.836	1.999	-8.9	116	0.00	14.56
97	cis-1,4-dichloro-2-butene	0.158	0.177	-12.0	113	0.00	14.63
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	15.92

6.7.2
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Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156560.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99 S	4-bromofluorobenzene (s)	0.975	0.967	0.8	109	0.00	14.77
100 M	bromobenzene	0.875	0.943	-7.8	118	0.00	14.96
101 M	1,1,2,2-tetrachloroethane	0.843	0.896	-6.3	113	0.00	14.87
102 M	trans-1,4-dichloro-2-bute	0.219	0.242	-10.5	116	0.00	14.91
103 M	1,2,3-trichloropropane	0.246	0.257	-4.5	117	0.00	14.94
104 M	n-propylbenzene	4.255	4.551	-7.0	116	0.00	14.97
105 M	2-chlorotoluene	0.882	0.919	-4.2	115	0.00	15.12
106 M	4-chlorotoluene	2.567	2.721	-6.0	118	0.00	15.22
107 M	1,3,5-trimethylbenzene	3.037	3.262	-7.4	116	0.00	15.12
108 M	tert-butylbenzene	2.609	2.844	-9.0	117	0.00	15.46
109 M	1,2,4-trimethylbenzene	3.015	3.283	-8.9	116	0.00	15.51
110 M	sec-butylbenzene	3.875	4.206	-8.5	116	0.00	15.68
111 M	1,3-dichlorobenzene	1.681	1.811	-7.7	120	0.00	15.86
112 M	p-isopropyltoluene	3.291	3.628	-10.2	117	0.00	15.79
113 M	1,4-dichlorobenzene	1.705	1.831	-7.4	118	0.00	15.95
114 M	1,2-dichlorobenzene	1.671	1.763	-5.5	117	0.00	16.32
115 M	n-butylbenzene	1.675	1.819	-8.6	114	0.00	16.19
116 M	1,2-dibromo-3-chloropropene	0.189	0.198	-4.8	111	0.00	17.05
117	1,3,5-trichlorobenzene	1.372	1.524	-11.1	120	0.00	17.22
118 M	1,2,4-trichlorobenzene	1.219	1.306	-7.1	115	0.00	17.79
119	2-ethylhexyl acrylate	0.864	0.977	-13.1	121	0.00	17.76
120 M	hexachlorobutadiene	0.580	0.631	-8.8	115	0.00	17.90
121 M	naphthalene	2.720	3.017	-10.9	115	0.00	18.05
122 M	1,2,3-trichlorobenzene	1.127	1.196	-6.1	114	0.00	18.27
123 M	hexachloroethane	0.480	0.557	-16.0	120	0.00	16.57
124	benzyl chloride	1.773	2.271	-28.1	137	0.00	16.06
125	2-methylnaphthalene	1.440	1.693	-17.6	123	0.00	19.14
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			

(#= Out of Range
2E156555.D M2E6949.MSPCC's out = 0 CCC's out = 0
Thu Oct 10 15:10:14 20196.7.2
6

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156561.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\V2E6949\2E156561.D Vial: 15
 Acq On : 9 Oct 2019 10:02 pm Operator: roberts
 Sample : icv6949-50 Inst : VOAMS2E
 Misc : MS37796,V2E6949,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 Last Update : Thu Oct 10 14:35:42 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	102	0.00	7.33
2	ethanol		-----NA-----				
3 M	tertiary butyl alcohol		-----NA-----				
4	1,4-dioxane		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	9.56
6 M	chlorodifluoromethane		-----NA-----				
7 M	dichlorodifluoromethane		-----NA-----				
8 M	chloromethane		-----NA-----				
9 M	vinyl chloride		-----NA-----				
10 M	bromomethane		-----NA-----				
11 M	chloroethane		-----NA-----				
12 M	trichlorofluoromethane		-----NA-----				
13	1,3-butadiene		-----NA-----				
14	vinyl bromide		-----NA-----				
15 M	ethyl ether		-----NA-----				
16	2-chloropropane		-----NA-----				
17 M	acrolein		-----NA-----				
18	freon 113		-----NA-----				
19 M	1,1-dichloroethene		-----NA-----				
20 M	acetone		-----NA-----				
21	acetonitrile	0.068	0.074	-8.8	108	0.00	7.14
22 M	iodomethane		-----NA-----				
23 M	carbon disulfide		-----NA-----				
24 M	methylene chloride		-----NA-----				
25 M	methyl acetate		-----NA-----				
26 M	methyl tert butyl ether		-----NA-----				
27 M	trans-1,2-dichloroethene		-----NA-----				
28	hexane		-----NA-----				
29 M	di-isopropyl ether		-----NA-----				
30 M	ethyl tert-butyl ether		-----NA-----				
31 M	2-butanone		-----NA-----				
32 M	1,1-dichloroethane		-----NA-----				
33 M	chloroprene		-----NA-----				
34 M	acrylonitrile	0.187	0.215	-15.0	111	0.00	7.70
35 M	vinyl acetate		-----NA-----				
36 M	ethyl acetate		-----NA-----				
37 M	2,2-dichloropropane		-----NA-----				
38 M	cis-1,2-dichloroethene		-----NA-----				
39 M	propionitrile		-----NA-----				
40	methyl acrylate		-----NA-----				
41 M	bromochloromethane		-----NA-----				

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156561.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42 M	tetrahydrofuran		-----	-NA-----					
43 M	chloroform		-----	-NA-----					
44	t-butyl formate		-----	-NA-----					
45	1,1-dichloropropene		-----	-NA-----					
46	carbon tetrachloride		-----	-NA-----					
47	isopropyl acetate		-----	-NA-----					
48 S	dibromofluoromethane (s)	0.442	0.447	-1.1	98	0.00			9.62
49 M	methacrylonitrile		-----	-NA-----					
50 M	1,1,1-trichloroethane		-----	-NA-----					
51	cyclohexane		-----	-NA-----					
52	iso-butyl alcohol		-----	-NA-----					
53	tert amyl alcohol		-----	-NA-----					
54 I	1,4-difluorobenzene	1.000	1.000	0.0	98	0.00			10.48
55 S	1,2-dichloroethane-d4 (s)	0.301	0.309	-2.7	101	0.00			10.04
56	2,2,4-trimethylpentane		-----	-NA-----					
57 M	n-butyl alcohol		-----	-NA-----					
58 M	benzene		-----	-NA-----					
59	tert-amyl methyl ether		-----	-NA-----					
60 M	heptane		-----	-NA-----					
61 M	1,2-dichloroethane		-----	-NA-----					
62	ethyl acrylate		-----	-NA-----					
63 M	trichloroethene		-----	-NA-----					
64 M	2-nitropropane		-----	-NA-----					
65 M	2-chloroethyl vinyl ether		-----	-NA-----					
66 M	methyl methacrylate		-----	-NA-----					
67 M	1,2-dichloropropane		-----	-NA-----					
68 M	methylcyclohexane		-----	-NA-----					
69 M	dibromomethane		-----	-NA-----					
70 M	bromodichloromethane		-----	-NA-----					
71	epichlorohydrin		-----	-NA-----					
72 M	cis-1,3-dichloropropene		-----	-NA-----					
73 M	4-methyl-2-pentanone		-----	-NA-----					
74 M	3-methyl-1-butanol		-----	-NA-----					
75 I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00			13.62
76 S	toluene-d8 (s)	1.381	1.361	1.4	98	0.00			12.12
77	toluene		-----	-NA-----					
78	ethyl methacrylate		-----	-NA-----					
79	trans-1,3-dichloropropene		-----	-NA-----					
80	1,1,2-trichloroethane		-----	-NA-----					
81 M	tetrachloroethene	0.323	0.413	-27.9	126	0.00			12.77
82	2-hexanone		-----	-NA-----					
83 M	1,3-dichloropropane		-----	-NA-----					
84 M	butyl acetate		-----	-NA-----					
85 M	dibromochloromethane		-----	-NA-----					
86 M	1,2-dibromoethane		-----	-NA-----					
87	n-butyl ether		-----	-NA-----					
88 M	chlorobenzene		-----	-NA-----					
89 M	1,1,1,2-tetrachloroethane		-----	-NA-----					
90 M	ethylbenzene		-----	-NA-----					
91 M	m,p-xylene		-----	-NA-----					
92 M	o-xylene		-----	-NA-----					
93 M	styrene		-----	-NA-----					
94	butyl acrylate		-----	-NA-----					
95 M	bromoform		-----	-NA-----					
96	isopropylbenzene		-----	-NA-----					
97	cis-1,4-dichloro-2-butene		-----	-NA-----					
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00			15.92

6.7.3
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Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156561.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99 S	4-bromofluorobenzene (s)	0.975	0.995	-2.1	98	0.00	14.77
100 M	bromobenzene		-----	NA	-----		
101 M	1,1,2,2-tetrachloroethane		-----	NA	-----		
102 M	trans-1,4-dichloro-2-bute		-----	NA	-----		
103 M	1,2,3-trichloropropane		-----	NA	-----		
104 M	n-propylbenzene		-----	NA	-----		
105 M	2-chlorotoluene		-----	NA	-----		
106 M	4-chlorotoluene		-----	NA	-----		
107 M	1,3,5-trimethylbenzene		-----	NA	-----		
108 M	tert-butylbenzene		-----	NA	-----		
109 M	1,2,4-trimethylbenzene		-----	NA	-----		
110 M	sec-butylbenzene		-----	NA	-----		
111 M	1,3-dichlorobenzene		-----	NA	-----		
112 M	p-isopropyltoluene		-----	NA	-----		
113 M	1,4-dichlorobenzene		-----	NA	-----		
114 M	1,2-dichlorobenzene		-----	NA	-----		
115 M	n-butylbenzene		-----	NA	-----		
116 M	1,2-dibromo-3-chloropropene		-----	NA	-----		
117	1,3,5-trichlorobenzene		-----	NA	-----		
118 M	1,2,4-trichlorobenzene		-----	NA	-----		
119	2-ethylhexyl acrylate		-----	NA	-----		
120 M	hexachlorobutadiene		-----	NA	-----		
121 M	naphthalene		-----	NA	-----		
122 M	1,2,3-trichlorobenzene		-----	NA	-----		
123 M	hexachloroethane		-----	NA	-----		
124	benzyl chloride		-----	NA	-----		
125	2-methylnaphthalene		-----	NA	-----		
126	Bis(chloromethyl)ether		-----	NA	-----		
127	Ethylenimine		-----	NA	-----		

(##) = Out of Range
2E156555.D M2E6949.MSPCC's out = 0 CCC's out = 0
Thu Oct 10 14:39:27 2019

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156566.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\V2E6949\2E156566.D Vial: 2
 Acq On : 10 Oct 2019 11:06 am Operator: roberts
 Sample : icv6949-50 Inst : VOAMS2E
 Misc : MS37796,V2E6949,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 Last Update : Thu Oct 10 14:35:42 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	89	0.00
2	ethanol	0.136	0.151	-11.0	100	0.00
3 M	tertiary butyl alcohol	1.333	1.472	-10.4	93	0.00
4	1,4-dioxane	0.111	0.121	-9.0	94	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	93	0.00
6 M	chlorodifluoromethane	0.842	0.763	9.4	83	0.00
7 M	dichlorodifluoromethane			-----NA-----		
8 M	chloromethane			-----NA-----		
9 M	vinyl chloride			-----NA-----		
10 M	bromomethane			-----NA-----		
11 M	chloroethane			-----NA-----		
12 M	trichlorofluoromethane			-----NA-----		
13	1,3-butadiene	0.586	0.638	-8.9	97	0.00
14	vinyl bromide			-----NA-----		
15 M	ethyl ether	0.313	0.284	9.3	86	0.00
16	2-chloropropane	0.984	0.943	4.2	91	0.00
17 M	acrolein			-----NA-----		
18	freon 113	0.375	0.386	-2.9	94	0.00
19 M	1,1-dichloroethene	0.769	0.698	9.2	83	0.00
20 M	acetone	0.145	0.162	-11.7	111	0.00
21	acetonitrile			-----NA-----		
22 M	iodomethane	0.623	0.734	-17.8	110	0.00
23 M	carbon disulfide	1.378	1.523	-10.5	103	0.00
24 M	methylene chloride	0.550	0.494	10.2	88	0.00
25 M	methyl acetate	0.368	0.322	12.5	81	0.00
26 M	methyl tert butyl ether	1.494	1.353	9.4	87	0.00
27 M	trans-1,2-dichloroethene	0.716	0.694	3.1	89	0.00
28	hexane			-----NA-----		
29 M	di-isopropyl ether	1.928	1.807	6.3	86	0.00
30 M	ethyl tert-butyl ether	1.677	1.637	2.4	89	0.00
31 M	2-butanone	0.051	0.059	-15.7	98	0.00
32 M	1,1-dichloroethane	0.956	0.925	3.2	89	0.00
33 M	chloroprene	0.781	0.785	-0.5	91	0.00
34 M	acrylonitrile			-----NA-----		
35 M	vinyl acetate	0.106	0.106	0.0	83	0.00
36 M	ethyl acetate	0.083	0.070	15.7	82	0.00
37 M	2,2-dichloropropane	0.828	0.782	5.6	91	0.00
38 M	cis-1,2-dichloroethene	0.584	0.530	9.2	87	0.00
39 M	propionitrile	0.067	0.070	-4.5	91	0.00
40	methyl acrylate	0.068	0.068	0.0	89	0.00
41 M	bromochloromethane	0.266	0.250	6.0	89	0.00

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156566.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42 M	tetrahydrofuran	0.066	0.062	6.1	89	0.00	9.41	
43 M	chloroform	0.892	0.844	5.4	91	0.00	9.41	
44	t-butyl formate	0.518	0.382	26.3	68	0.00	9.45	
45	1,1-dichloropropene	0.715	0.697	2.5	89	0.00	9.85	
46	carbon tetrachloride	0.677	0.662	2.2	90	0.00	9.87	
47	isopropyl acetate	0.117	0.107	8.5	84	0.00	10.03	
48 S	dibromofluoromethane (s)	0.442	0.455	-2.9	95	0.00	9.62	
49 M	methacrylonitrile	0.187	0.194	-3.7	90	0.00	9.30	
50 M	1,1,1-trichloroethane	0.794	0.741	6.7	87	0.00	9.67	
51	cyclohexane			-----NA-----				
52	iso-butyl alcohol	0.021	0.021	0.0	90	0.00	9.85	
53	tert amyl alcohol	0.028	0.026	7.1	88	0.00	9.98	
54 I	1,4-difluorobenzene	1.000	1.000	0.0	94	0.00	10.48	
55 S	1,2-dichloroethane-d4 (s)	0.301	0.316	-5.0	99	0.00	10.04	
56	2,2,4-trimethylpentane	1.069	1.385	-29.6	116	0.00	10.10	
57 M	n-butyl alcohol	0.009	0.009#	0.0	90	0.00	10.60	
58 M	benzene	1.430	1.300	9.1	89	0.00	10.11	
59	tert-amyl methyl ether	1.104	0.978	11.4	86	0.00	10.14	
60 M	heptane	0.244	0.335	-37.3#	120	0.00	10.28	
61 M	1,2-dichloroethane	0.422	0.381	9.7	87	0.00	10.13	
62	ethyl acrylate	0.376	0.366	2.7	86	0.00	10.82	
63 M	trichloroethene	0.332	0.318	4.2	91	0.00	10.82	
64 M	2-nitropropane	0.103	0.109	-5.8	95	0.00	11.60	
65 M	2-chloroethyl vinyl ether	0.199	0.219	-10.1	98	0.00	11.61	
66 M	methyl methacrylate	0.081	0.082	-1.2	92	0.00	11.09	
67 M	1,2-dichloropropane	0.362	0.350	3.3	90	0.00	11.09	
68 M	methylcyclohexane	0.592	0.599	-1.2	91	0.00	11.04	
69 M	dibromomethane	0.190	0.179	5.8	88	0.00	11.25	
70 M	bromodichloromethane	0.423	0.408	3.5	89	0.00	11.38	
71	epichlorohydrin	0.030	0.032	-6.7	96	0.00	11.74	
72 M	cis-1,3-dichloropropene	0.553	0.555	-0.4	91	0.00	11.83	
73 M	4-methyl-2-pentanone	0.116	0.117	-0.9	89	0.00	11.92	
74 M	3-methyl-1-butanol	0.009	0.009#	0.0	83	0.00	11.94	
75 I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	13.62	
76 S	toluene-d8 (s)	1.381	1.342	2.8	94	0.00	12.12	
77	toluene	1.020	0.938	8.0	89	0.00	12.19	
78	ethyl methacrylate	0.455	0.476	-4.6	92	0.00	12.38	
79	trans-1,3-dichloropropene	0.562	0.576	-2.5	93	0.00	12.39	
80	1,1,2-trichloroethane	0.283	0.270	4.6	92	0.00	12.60	
81 M	tetrachloroethene			-----NA-----				
82	2-hexanone	0.125	0.137	-9.6	93	0.00	12.77	
83 M	1,3-dichloropropane	0.596	0.563	5.5	91	0.00	12.78	
84 M	butyl acetate	0.254	0.250	1.6	90	0.00	12.84	
85 M	dibromochloromethane	0.365	0.369	-1.1	94	0.00	13.05	
86 M	1,2-dibromoethane	0.361	0.314	13.0	80	0.00	13.20	
87	n-butyl ether	1.776	1.820	-2.5	94	0.00	13.56	
88 M	chlorobenzene	1.068	1.029	3.7	93	0.00	13.65	
89 M	1,1,1,2-tetrachloroethane	0.381	0.372	2.4	92	0.00	13.71	
90 M	ethylbenzene	1.853	1.759	5.1	91	0.00	13.70	
91 M	m,p-xylene	0.719	0.691	3.9	92	0.00	13.81	
92 M	o-xylene	1.495	1.424	4.7	91	0.00	14.23	
93 M	styrene	1.114	1.132	-1.6	91	0.00	14.24	
94	butyl acrylate	0.683	0.727	-6.4	90	0.00	14.05	
95 M	bromoform	0.222	0.241	-8.6	98	0.00	14.50	
96	isopropylbenzene	1.836	1.783	2.9	91	0.00	14.56	
97	cis-1,4-dichloro-2-butene	0.158	0.165	-4.4	93	0.00	14.63	
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	15.92	

6.7.4
6

Initial Calibration Verification

Job Number: JD3298

Sample: V2E6949-ICV6949

Account: UTC United Technologies Corporation

Lab FileID: 2E156566.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99 S	4-bromofluorobenzene (s)	0.975	0.972	0.3	97	0.00	14.77
100 M	bromobenzene	0.875	0.826	5.6	92	0.00	14.96
101 M	1,1,2,2-tetrachloroethane	0.843	0.819	2.8	92	0.00	14.87
102 M	trans-1,4-dichloro-2-bute	0.219	0.226	-3.2	96	0.00	14.91
103 M	1,2,3-trichloropropane	0.246	0.220	10.6	89	0.00	14.94
104 M	n-propylbenzene	4.255	4.130	2.9	94	0.00	14.97
105 M	2-chlorotoluene	0.882	0.816	7.5	91	0.00	15.12
106 M	4-chlorotoluene	2.567	2.450	4.6	94	0.00	15.21
107 M	1,3,5-trimethylbenzene	3.037	2.871	5.5	91	0.00	15.12
108 M	tert-butylbenzene	2.609	2.516	3.6	92	0.00	15.46
109 M	1,2,4-trimethylbenzene	3.015	2.973	1.4	94	0.00	15.51
110 M	sec-butylbenzene	3.875	3.778	2.5	92	0.00	15.68
111 M	1,3-dichlorobenzene	1.681	1.606	4.5	95	0.00	15.86
112 M	p-isopropyltoluene	3.291	3.235	1.7	93	0.00	15.79
113 M	1,4-dichlorobenzene	1.705	1.634	4.2	94	0.00	15.95
114 M	1,2-dichlorobenzene	1.671	1.581	5.4	94	0.00	16.32
115 M	n-butylbenzene	1.675	1.679	-0.2	94	0.00	16.19
116 M	1,2-dibromo-3-chloropropene	0.189	0.176	6.9	87	0.00	17.05
117	1,3,5-trichlorobenzene	1.372	1.373	-0.1	96	0.00	17.22
118 M	1,2,4-trichlorobenzene	1.219	1.184	2.9	93	0.00	17.79
119	2-ethylhexyl acrylate	0.864	0.880	-1.9	97	0.00	17.76
120 M	hexachlorobutadiene	0.580	0.568	2.1	92	0.00	17.90
121 M	naphthalene	2.720	2.707	0.5	92	0.00	18.05
122 M	1,2,3-trichlorobenzene	1.127	1.071	5.0	91	0.00	18.27
123 M	hexachloroethane	0.480	0.491	-2.3	94	0.00	16.57
124	benzyl chloride	1.773	2.300	-29.7	123	0.00	16.06
125	2-methylnaphthalene	1.440	1.496	-3.9	97	0.00	19.14
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			
<hr/>							

(#= Out of Range
2E156555.D M2E6949.MSPCC's out = 0 CCC's out = 0
Thu Oct 10 14:39:30 2019

Continuing Calibration Summary

Job Number: JD3298

Sample: V2E8003-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159597.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...20\v2e8003\2e159597.d Vial: 2
 Acq On : 18 Feb 2020 7:21 am Operator: edwardd
 Sample : cc6949-20 Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 Last Update : Mon Jan 20 11:39:19 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	99	-0.02
2	ethanol	0.136	0.115	15.4	87	0.00
3 M	tertiary butyl alcohol	1.333	1.430	-7.3	111	0.00
4	1,4-dioxane	0.111	0.112	-0.9	100	-0.02
5 I	pentafluorobenzene	1.000	1.000	0.0	101	-0.01
6 M	chlorodifluoromethane	0.842	0.788	6.4	99	0.00
7 M	dichlorodifluoromethane	0.636	0.801	-25.9#	133	-0.01
8 M	chloromethane	0.878	0.747	14.9	93	0.00
9 M	vinyl chloride	0.865	0.785	9.2	96	0.00
10 M	bromomethane	0.512	0.527	-2.9	112	0.00
11 M	chloroethane	0.448	0.435	2.9	104	0.00
12 M	trichlorofluoromethane	0.724	0.889	-22.8#	129	0.00
13	1,3-butadiene	0.586	0.586	0.0	106	0.00
14	vinyl bromide	0.418	0.459	-9.8	119	0.00
15 M	ethyl ether	0.313	0.314	-0.3	109	0.00
16	2-chloropropane	0.984	0.969	1.5	110	-0.01
17 M	acrolein	0.099	0.098	1.0	98	0.00
18	freon 113	0.375	0.452	-20.5#	126	-0.01
19 M	1,1-dichloroethene	0.769	0.835	-8.6	115	-0.01
20 M	acetone	0.145	0.132	9.0	100	-0.01
21	acetonitrile	0.068	0.067	1.5	103	0.00
22 M	iodomethane	0.623	0.690	-10.8	119	-0.01
23 M	carbon disulfide	1.378	1.484	-7.7	116	-0.01
24 M	methylene chloride	0.550	0.574	-4.4	116	-0.02
25 M	methyl acetate	0.368	0.384	-4.3	108	-0.01
26 M	methyl tert butyl ether	1.494	1.459	2.3	106	-0.01
27 M	trans-1,2-dichloroethene	0.716	0.778	-8.7	115	-0.01
28	hexane	0.393	0.456	-16.0	120	0.00
29 M	di-isopropyl ether	1.928	1.876	2.7	102	-0.01
30 M	ethyl tert-butyl ether	1.677	1.718	-2.4	106	-0.01
31 M	2-butanone	0.051	0.055	-7.8	105	0.00
32 M	1,1-dichloroethane	0.956	1.022	-6.9	112	-0.01
33 M	chloroprene	0.781	0.833	-6.7	114	-0.02
34 M	acrylonitrile	0.187	0.194	-3.7	106	-0.02
35 M	vinyl acetate	0.106	0.127	-19.8	119	-0.01
36 M	ethyl acetate	0.083	0.079	4.8	96	-0.02
37 M	2,2-dichloropropane	0.828	0.843	-1.8	112	-0.02
38 M	cis-1,2-dichloroethene	0.584	0.612	-4.8	113	-0.01
39 M	propionitrile	0.067	0.062	7.5	90	-0.01
40	methyl acrylate	0.068	0.074	-8.8	113	0.00
41 M	bromochloromethane	0.266	0.294	-10.5	117	-0.01

Continuing Calibration Summary

Page 2 of 3

Job Number: JD3298

Sample: V2E8003-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159597.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42 M	tetrahydrofuran	0.066	0.061	7.6	99	-0.02	9.39
43 M	chloroform	0.892	0.984	-10.3	120	-0.01	9.41
44	t-butyl formate	0.518	0.390	24.7#	77	-0.01	9.44
45	1,1-dichloropropene	0.715	0.730	-2.1	109	0.00	9.84
46	carbon tetrachloride	0.677	0.754	-11.4	119	-0.01	9.86
47	isopropyl acetate	0.117	0.115	1.7	102	-0.01	10.02
48 S	dibromofluoromethane (s)	0.442	0.463	-4.8	106	-0.01	9.61
49 M	methacrylonitrile	0.187	0.196	-4.8	105	-0.02	9.29
50 M	1,1,1-trichloroethane	0.794	0.867	-9.2	116	-0.02	9.66
51	cyclohexane	0.811	0.812	-0.1	107	0.00	9.74
52	iso-butyl alcohol	0.021	0.020	4.8	92	0.00	9.85
53	tert amyl alcohol	0.028	0.026	7.1	94	-0.02	9.97
54 I	1,4-difluorobenzene	1.000	1.000	0.0	100	-0.01	10.47
55 S	1,2-dichloroethane-d4 (s)	0.301	0.326	-8.3	110	-0.01	10.03
56	2,2,4-trimethylpentane	1.069	1.200	-12.3	119	-0.01	10.10
57 M	n-butyl alcohol	0.009	0.009#	0.0	93	0.00	10.60
58 M	benzene	1.430	1.458	-2.0	112	-0.01	10.10
59	tert-amyl methyl ether	1.104	1.103	0.1	109	-0.02	10.13
60 M	heptane	0.244	0.265	-8.6	112	-0.01	10.27
61 M	1,2-dichloroethane	0.422	0.461	-9.2	115	-0.01	10.12
62	ethyl acrylate	0.376	0.381	-1.3	102	-0.01	10.82
63 M	trichloroethene	0.332	0.344	-3.6	112	-0.01	10.82
64 M	2-nitropropane	0.103	0.107	-3.9	105	0.00	11.59
65 M	2-chloroethyl vinyl ether	0.199	0.190	4.5	96	-0.01	11.60
66 M	methyl methacrylate	0.081	0.082	-1.2	104	0.00	11.09
67 M	1,2-dichloropropane	0.362	0.358	1.1	103	-0.02	11.07
68 M	methylcyclohexane	0.592	0.617	-4.2	109	-0.01	11.03
69 M	dibromomethane	0.190	0.205	-7.9	112	-0.01	11.24
70 M	bromodichloromethane	0.423	0.465	-9.9	114	-0.02	11.36
71	epichlorohydrin	0.030	0.031	-3.3	102	-0.01	11.72
72 M	cis-1,3-dichloropropene	0.553	0.570	-3.1	106	-0.01	11.82
73 M	4-methyl-2-pentanone	0.116	0.119	-2.6	100	-0.01	11.91
74 M	3-methyl-1-butanol	0.009	0.009#	0.0	93	0.00	11.93
75 I	chlorobenzene-d5	1.000	1.000	0.0	102	-0.02	13.61
76 S	toluene-d8 (s)	1.381	1.290	6.6	95	-0.01	12.11
77	toluene	1.020	1.014	0.6	109	-0.01	12.18
78	ethyl methacrylate	0.455	0.452	0.7	101	-0.01	12.37
79	trans-1,3-dichloropropene	0.562	0.602	-7.1	108	-0.01	12.37
80	1,1,2-trichloroethane	0.283	0.284	-0.4	105	-0.01	12.59
81 M	tetrachloroethene	0.323	0.339	-5.0	111	-0.01	12.76
82	2-hexanone	0.125	0.121	3.2	93	-0.01	12.76
83 M	1,3-dichloropropane	0.596	0.582	2.3	104	-0.01	12.77
84 M	butyl acetate	0.254	0.243	4.3	97	-0.01	12.83
85 M	dibromochloromethane	0.365	0.395	-8.2	112	-0.01	13.04
86 M	1,2-dibromoethane	0.361	0.372	-3.0	104	-0.01	13.18
87	n-butyl ether	1.776	1.637	7.8	97	0.00	13.55
88 M	chlorobenzene	1.068	1.063	0.5	105	-0.02	13.64
89 M	1,1,1,2-tetrachloroethane	0.381	0.401	-5.2	108	-0.01	13.70
90 M	ethylbenzene	1.853	1.834	1.0	106	-0.01	13.70
91 M	m,p-xylene	0.719	0.715	0.6	106	-0.01	13.80
92 M	o-xylene	1.495	1.487	0.5	106	-0.01	14.22
93 M	styrene	1.114	1.138	-2.2	105	-0.01	14.23
94	butyl acrylate	0.683	0.650	4.8	93	0.00	14.04
95 M	bromoform	0.222	0.240	-8.1	108	-0.01	14.49
96	isopropylbenzene	1.836	1.806	1.6	104	-0.01	14.55
97	cis-1,4-dichloro-2-butene	0.158	0.134	15.2	89	-0.01	14.62
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	-0.01	15.91

6.7.5
6

Continuing Calibration Summary

Job Number: JD3298

Sample: V2E8003-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159597.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99 S	4-bromofluorobenzene (s)	0.975	0.961	1.4	100	-0.01	14.76
100 M	bromobenzene	0.875	0.927	-5.9	111	-0.01	14.95
101 M	1,1,2,2-tetrachloroethane	0.843	0.839	0.5	101	-0.02	14.85
102 M	trans-1,4-dichloro-2-bute	0.219	0.208	5.0	97	-0.01	14.90
103 M	1,2,3-trichloropropane	0.246	0.245	0.4	105	-0.02	14.93
104 M	n-propylbenzene	4.255	4.200	1.3	103	-0.01	14.96
105 M	2-chlorotoluene	0.882	0.860	2.5	103	-0.01	15.11
106 M	4-chlorotoluene	2.567	2.581	-0.5	107	-0.02	15.20
107 M	1,3,5-trimethylbenzene	3.037	3.046	-0.3	107	-0.01	15.11
108 M	tert-butylbenzene	2.609	2.918	-11.8	118	-0.01	15.45
109 M	1,2,4-trimethylbenzene	3.015	3.058	-1.4	105	-0.01	15.50
110 M	sec-butylbenzene	3.875	3.728	3.8	101	-0.01	15.67
111 M	1,3-dichlorobenzene	1.681	1.713	-1.9	108	-0.01	15.85
112 M	p-isopropyltoluene	3.291	3.181	3.3	101	-0.01	15.78
113 M	1,4-dichlorobenzene	1.705	1.741	-2.1	108	-0.02	15.93
114 M	1,2-dichlorobenzene	1.671	1.649	1.3	105	-0.01	16.31
115 M	n-butylbenzene	1.675	1.606	4.1	99	0.00	16.19
116 M	1,2-dibromo-3-chloropropene	0.189	0.166	12.2	92	-0.02	17.04
117	1,3,5-trichlorobenzene	1.372	1.346	1.9	102	-0.01	17.21
118 M	1,2,4-trichlorobenzene	1.219	1.141	6.4	98	-0.01	17.78
119	2-ethylhexyl acrylate	0.864	0.425	50.8#	56	0.00	17.75
120 M	hexachlorobutadiene	0.580	0.556	4.1	98	-0.01	17.89
121 M	naphthalene	2.720	2.459	9.6	90	-0.01	18.04
122 M	1,2,3-trichlorobenzene	1.127	1.032	8.4	96	-0.01	18.26
123 M	hexachloroethane	0.480	0.501	-4.4	109	-0.01	16.56
124	benzyl chloride	1.773	1.729	2.5	101	-0.01	16.04
125	2-methylnaphthalene	1.440	0.886	38.5#	63	-0.02	19.12
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			
128 I	pentafluorobenzene(a)	1.000	1.000	0.0	108	-0.01	9.55
129	Freon 142B			-----NA-----			
130	allyl chloride			-----NA-----			

(#= Out of Range
2E156554.D M2E6949.MSPCC's out = 0 CCC's out = 0
Wed Feb 19 00:39:12 20206.7.5
6

Continuing Calibration Summary

Job Number: JD3298

Sample: V2E8004-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159622.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\da...20\v2e8004\2e159622.d Vial: 2
 Acq On : 19 Feb 2020 7:16 am Operator: edwardd
 Sample : CC6949-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 Last Update : Mon Jan 20 11:39:19 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	106	-0.01
2	ethanol	0.136	0.123	9.6	100	0.00
3 M	tertiary butyl alcohol	1.333	1.478	-10.9	123	-0.01
4	1,4-dioxane	0.111	0.123	-10.8	118	-0.02
5 I	pentafluorobenzene	1.000	1.000	0.0	102	-0.01
6 M	chlorodifluoromethane	0.842	0.771	8.4	98	0.00
7 M	dichlorodifluoromethane	0.636	0.754	-18.6	126	0.00
8 M	chloromethane	0.878	0.741	15.6	94	0.00
9 M	vinyl chloride	0.865	0.758	12.4	94	0.00
10 M	bromomethane	0.512	0.520	-1.6	112	0.00
11 M	chloroethane	0.448	0.428	4.5	104	0.00
12 M	trichlorofluoromethane	0.724	0.866	-19.6	127	0.00
13	1,3-butadiene	0.586	0.547	6.7	100	0.00
14	vinyl bromide	0.418	0.452	-8.1	118	0.00
15 M	ethyl ether	0.313	0.315	-0.6	110	0.00
16	2-chloropropane	0.984	0.947	3.8	109	-0.01
17 M	acrolein	0.099	0.098	1.0	98	0.00
18	freon 113	0.375	0.436	-16.3	123	0.00
19 M	1,1-dichloroethene	0.769	0.829	-7.8	116	-0.01
20 M	acetone	0.145	0.138	4.8	106	0.00
21	acetonitrile	0.068	0.066	2.9	102	-0.01
22 M	iodomethane	0.623	0.675	-8.3	117	0.00
23 M	carbon disulfide	1.378	1.465	-6.3	116	0.00
24 M	methylene chloride	0.550	0.575	-4.5	117	-0.01
25 M	methyl acetate	0.368	0.391	-6.3	111	0.00
26 M	methyl tert butyl ether	1.494	1.495	-0.1	110	-0.01
27 M	trans-1,2-dichloroethene	0.716	0.774	-8.1	116	-0.01
28	hexane	0.393	0.446	-13.5	119	0.00
29 M	di-isopropyl ether	1.928	1.913	0.8	106	-0.01
30 M	ethyl tert-butyl ether	1.677	1.769	-5.5	111	-0.01
31 M	2-butanone	0.051	0.057	-11.8	109	-0.01
32 M	1,1-dichloroethane	0.956	1.016	-6.3	113	-0.01
33 M	chloroprene	0.781	0.844	-8.1	117	-0.01
34 M	acrylonitrile	0.187	0.189	-1.1	105	-0.01
35 M	vinyl acetate	0.106	0.124	-17.0	118	-0.01
36 M	ethyl acetate	0.083	0.082	1.2	101	-0.01
37 M	2,2-dichloropropane	0.828	0.844	-1.9	114	-0.02
38 M	cis-1,2-dichloroethene	0.584	0.628	-7.5	117	0.00
39 M	propionitrile	0.067	0.064	4.5	94	-0.01
40	methyl acrylate	0.068	0.069	-1.5	107	0.00
41 M	bromochloromethane	0.266	0.292	-9.8	118	-0.01

Continuing Calibration Summary

Page 2 of 3

Job Number: JD3298

Sample: V2E8004-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159622.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42 M	tetrahydrofuran	0.066	0.066	0.0	108	-0.01	9.40
43 M	chloroform	0.892	0.975	-9.3	121	-0.01	9.41
44	t-butyl formate	0.518	0.375	27.6#	75	-0.01	9.44
45	1,1-dichloropropene	0.715	0.731	-2.2	110	-0.01	9.84
46	carbon tetrachloride	0.677	0.744	-9.9	118	-0.01	9.86
47	isopropyl acetate	0.117	0.119	-1.7	107	-0.01	10.02
48 S	dibromofluoromethane (s)	0.442	0.461	-4.3	106	-0.01	9.61
49 M	methacrylonitrile	0.187	0.190	-1.6	103	-0.01	9.29
50 M	1,1,1-trichloroethane	0.794	0.860	-8.3	117	-0.01	9.66
51	cyclohexane	0.811	0.794	2.1	106	0.00	9.74
52	iso-butyl alcohol	0.021	0.020	4.8	94	-0.01	9.84
53	tert amyl alcohol	0.028	0.028	0.0	103	-0.02	9.97
54 I	1,4-difluorobenzene	1.000	1.000	0.0	101	-0.01	10.47
55 S	1,2-dichloroethane-d4 (s)	0.301	0.325	-8.0	111	-0.01	10.03
56	2,2,4-trimethylpentane	1.069	1.214	-13.6	121	-0.01	10.10
57 M	n-butyl alcohol	0.009	0.010#	-11.1	105	-0.01	10.60
58 M	benzene	1.430	1.461	-2.2	113	-0.01	10.10
59	tert-amyl methyl ether	1.104	1.120	-1.4	111	-0.02	10.13
60 M	heptane	0.244	0.270	-10.7	115	0.00	10.27
61 M	1,2-dichloroethane	0.422	0.461	-9.2	116	-0.01	10.12
62	ethyl acrylate	0.376	0.380	-1.1	103	-0.01	10.82
63 M	trichloroethene	0.332	0.349	-5.1	115	-0.01	10.82
64 M	2-nitropropane	0.103	0.110	-6.8	108	-0.02	11.58
65 M	2-chloroethyl vinyl ether	0.199	0.192	3.5	98	-0.01	11.60
66 M	methyl methacrylate	0.081	0.083	-2.5	107	-0.01	11.08
67 M	1,2-dichloropropane	0.362	0.354	2.2	103	-0.01	11.08
68 M	methylcyclohexane	0.592	0.624	-5.4	111	-0.01	11.03
69 M	dibromomethane	0.190	0.201	-5.8	111	-0.01	11.24
70 M	bromodichloromethane	0.423	0.463	-9.5	115	-0.02	11.36
71	epichlorohydrin	0.030	0.031	-3.3	104	-0.01	11.72
72 M	cis-1,3-dichloropropene	0.553	0.561	-1.4	105	-0.01	11.82
73 M	4-methyl-2-pentanone	0.116	0.118	-1.7	100	-0.01	11.91
74 M	3-methyl-1-butanol	0.009	0.009#	0.0	96	0.00	11.93
75 I	chlorobenzene-d5	1.000	1.000	0.0	101	-0.02	13.61
76 S	toluene-d8 (s)	1.381	1.307	5.4	96	-0.01	12.11
77	toluene	1.020	1.036	-1.6	111	-0.01	12.18
78	ethyl methacrylate	0.455	0.454	0.2	101	-0.01	12.37
79	trans-1,3-dichloropropene	0.562	0.604	-7.5	108	-0.01	12.37
80	1,1,2-trichloroethane	0.283	0.290	-2.5	107	-0.01	12.59
81 M	tetrachloroethene	0.323	0.330	-2.2	108	-0.01	12.76
82	2-hexanone	0.125	0.126	-0.8	96	-0.01	12.76
83 M	1,3-dichloropropane	0.596	0.599	-0.5	106	-0.02	12.77
84 M	butyl acetate	0.254	0.251	1.2	100	-0.01	12.83
85 M	dibromochloromethane	0.365	0.387	-6.0	109	-0.01	13.04
86 M	1,2-dibromoethane	0.361	0.370	-2.5	104	-0.01	13.18
87	n-butyl ether	1.776	1.679	5.5	99	0.00	13.55
88 M	chlorobenzene	1.068	1.069	-0.1	106	-0.02	13.64
89 M	1,1,1,2-tetrachloroethane	0.381	0.397	-4.2	107	-0.01	13.70
90 M	ethylbenzene	1.853	1.847	0.3	106	-0.01	13.70
91 M	m,p-xylene	0.719	0.721	-0.3	106	-0.01	13.80
92 M	o-xylene	1.495	1.516	-1.4	107	-0.01	14.22
93 M	styrene	1.114	1.159	-4.0	106	-0.01	14.23
94	butyl acrylate	0.683	0.663	2.9	94	0.00	14.04
95 M	bromoform	0.222	0.240	-8.1	108	-0.01	14.49
96	isopropylbenzene	1.836	1.824	0.7	104	-0.01	14.55
97	cis-1,4-dichloro-2-butene	0.158	0.143	9.5	94	-0.01	14.62
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	-0.01	15.91

6.7.6
6

Continuing Calibration Summary

Job Number: JD3298

Sample: V2E8004-CC6949

Account: UTC United Technologies Corporation

Lab FileID: 2E159622.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99 S	4-bromofluorobenzene (s)	0.975	0.963	1.2	100	-0.01	14.76
100 M	bromobenzene	0.875	0.921	-5.3	110	-0.01	14.95
101 M	1,1,2,2-tetrachloroethane	0.843	0.848	-0.6	102	-0.02	14.85
102 M	trans-1,4-dichloro-2-bute	0.219	0.220	-0.5	102	-0.01	14.90
103 M	1,2,3-trichloropropane	0.246	0.253	-2.8	108	-0.02	14.93
104 M	n-propylbenzene	4.255	4.239	0.4	104	-0.01	14.96
105 M	2-chlorotoluene	0.882	0.867	1.7	104	-0.01	15.11
106 M	4-chlorotoluene	2.567	2.611	-1.7	108	-0.01	15.21
107 M	1,3,5-trimethylbenzene	3.037	3.098	-2.0	108	-0.01	15.11
108 M	tert-butylbenzene	2.609	2.636	-1.0	106	-0.01	15.45
109 M	1,2,4-trimethylbenzene	3.015	3.117	-3.4	107	-0.01	15.50
110 M	sec-butylbenzene	3.875	3.745	3.4	101	-0.01	15.67
111 M	1,3-dichlorobenzene	1.681	1.696	-0.9	107	-0.01	15.85
112 M	p-isopropyltoluene	3.291	3.245	1.4	103	-0.01	15.78
113 M	1,4-dichlorobenzene	1.705	1.742	-2.2	107	-0.02	15.93
114 M	1,2-dichlorobenzene	1.671	1.655	1.0	105	-0.01	16.31
115 M	n-butylbenzene	1.675	1.621	3.2	99	0.00	16.19
116 M	1,2-dibromo-3-chloropropene	0.189	0.167	11.6	93	-0.01	17.04
117	1,3,5-trichlorobenzene	1.372	1.340	2.3	102	-0.01	17.21
118 M	1,2,4-trichlorobenzene	1.219	1.124	7.8	96	-0.01	17.78
119	2-ethylhexyl acrylate	0.864	0.406	53.0#	53	0.00	17.75
120 M	hexachlorobutadiene	0.580	0.550	5.2	96	-0.01	17.89
121 M	naphthalene	2.720	2.428	10.7	88	-0.01	18.04
122 M	1,2,3-trichlorobenzene	1.127	1.010	10.4	93	-0.01	18.26
123 M	hexachloroethane	0.480	0.501	-4.4	109	-0.01	16.56
124	benzyl chloride	1.773	1.760	0.7	103	-0.01	16.05
125	2-methylnaphthalene	1.440	0.875	39.2#	62	-0.01	19.13
126	Bis(chloromethyl)ether			-----NA-----			
127	Ethylenimine			-----NA-----			
128 I	pentafluorobenzene(a)	1.000	1.000	0.0	110	-0.01	9.55
129	Freon 142B			-----NA-----			
130	allyl chloride			-----NA-----			

(#= Out of Range
2E156554.D M2E6949.MSPCC's out = 0 CCC's out = 0
Wed Feb 19 22:28:09 20206.7.6
6

Run Sequence Report

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V2E6949	Method: SW846 8260C	Instrument ID: GCMS2E		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2E6949-BFB	2E156547.D	10/09/19 14:58	n/a	BFB Tune
V2E6949-IC6949	2E156548.D	10/09/19 15:27	n/a	Initial cal 0.2
V2E6949-IC6949	2E156549.D	10/09/19 15:58	n/a	Initial cal 0.5
V2E6949-IC6949	2E156550.D	10/09/19 16:29	n/a	Initial cal 1
V2E6949-IC6949	2E156551.D	10/09/19 16:59	n/a	Initial cal 2
V2E6949-IC6949	2E156552.D	10/09/19 17:29	n/a	Initial cal 4
V2E6949-IC6949	2E156553.D	10/09/19 18:00	n/a	Initial cal 8
V2E6949-IC6949	2E156554.D	10/09/19 18:30	n/a	Initial cal 20
V2E6949-ICC6949	2E156555.D	10/09/19 19:00	n/a	Initial cal 50
V2E6949-IC6949	2E156556.D	10/09/19 19:30	n/a	Initial cal 100
V2E6949-IC6949	2E156557.D	10/09/19 20:00	n/a	Initial cal 200
V2E6949-ICV6949	2E156560.D	10/09/19 21:32	n/a	Initial cal verification 50
V2E6949-ICV6949	2E156561.D	10/09/19 22:02	n/a	Initial cal verification 50
V2E6949-BFB2	2E156563.D	10/10/19 08:55	n/a	BFB Tune
V2E6949-ICV6949	2E156566.D	10/10/19 11:06	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID:	Method:	Instrument ID:		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID

V2E8003-BFB	2E159597.D	02/18/20 07:21	n/a	BFB Tune
V2E8003-CC6949	2E159597.D	02/18/20 07:21	n/a	Continuing cal 20
V2E8003-BS	2E159598.D	02/18/20 07:59	n/a	Blank Spike
V2E8003-MB	2E159600.D	02/18/20 09:00	n/a	Method Blank
JD3298-12	2E159604.D	02/18/20 11:12	n/a	HSSEN-GMZ02-021320
ZZZZZZ	2E159606.D	02/18/20 12:09	n/a	(unrelated sample)
JD3298-12MS	2E159608.D	02/18/20 13:10	n/a	Matrix Spike
JD3298-12MSD	2E159609.D	02/18/20 13:41	n/a	Matrix Spike Duplicate
ZZZZZZ	2E159611.D	02/18/20 14:42	n/a	(unrelated sample)
JD3298-1	2E159612.D	02/18/20 15:13	n/a	HSSEN-SMW01-021220
JD3298-2	2E159613.D	02/18/20 15:44	n/a	HSSEN-SMW08-021220
JD3298-3	2E159614.D	02/18/20 16:15	n/a	HSSEN-FBLK01-021220
JD3298-4	2E159615.D	02/18/20 16:45	n/a	HSSEN-SMW02-021220
JD3298-5	2E159616.D	02/18/20 17:16	n/a	HSSEN-GMZ01-021220
JD3298-7	2E159617.D	02/18/20 17:46	n/a	HSSEN-SMW19-021220
JD3298-8	2E159618.D	02/18/20 18:17	n/a	HSSEN-GMZ04-021220
JD3298-9	2E159619.D	02/18/20 18:47	n/a	HSSEN-SMW21-021220
JD3298-10	2E159620.D	02/18/20 19:18	n/a	HSSEN-SMW20-021320

Run Sequence Report

Job Number: JD3298

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V2E8004	Method: SW846 8260C	Instrument ID: GCMS2E		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2E8004-BFB	2E159622.D	02/19/20 07:16	n/a	BFB Tune
V2E8004-CC6949	2E159622.D	02/19/20 07:16	n/a	Continuing cal 20
V2E8004-BS	2E159623.D	02/19/20 07:54	n/a	Blank Spike
V2E8004-MB	2E159625.D	02/19/20 08:55	n/a	Method Blank
JD3298-6	2E159626.D	02/19/20 09:31	n/a	HSSE-R-MW07FGA-021220
JD3298-17	2E159627.D	02/19/20 10:01	n/a	HSSE-R-MW203-021320
JD3298-11	2E159628.D	02/19/20 10:32	n/a	HSSE-R-GMZ03-021320
ZZZZZZ	2E159629.D	02/19/20 11:03	n/a	(unrelated sample)
JD3298-6MS	2E159630.D	02/19/20 11:33	n/a	Matrix Spike
JD3298-6MSD	2E159631.D	02/19/20 12:04	n/a	Matrix Spike Duplicate
JD3298-20	2E159633.D	02/19/20 13:04	n/a	HSSE-R-TBLK01-021220
ZZZZZZ	2E159634.D	02/19/20 13:35	n/a	(unrelated sample)
ZZZZZZ	2E159635.D	02/19/20 14:05	n/a	(unrelated sample)
ZZZZZZ	2E159636.D	02/19/20 14:36	n/a	(unrelated sample)
JD3298-14	2E159637.D	02/19/20 15:06	n/a	HSSE-R-PMW01-021320
JD3298-15	2E159638.D	02/19/20 15:37	n/a	HSSE-R-PMW02-021320
JD3298-16	2E159639.D	02/19/20 16:07	n/a	HSSE-R-EBLK01-021320
JD3298-18	2E159640.D	02/19/20 16:37	n/a	HSSE-R-DUP01-021320
JD3298-19	2E159641.D	02/19/20 17:08	n/a	HSSE-R-SMW04-021420
ZZZZZZ	2E159642.D	02/19/20 17:39	n/a	(unrelated sample)
ZZZZZZ	2E159643.D	02/19/20 18:09	n/a	(unrelated sample)
ZZZZZZ	2E159644.D	02/19/20 18:40	n/a	(unrelated sample)
ZZZZZZ	2E159645.D	02/19/20 19:11	n/a	(unrelated sample)

MS Volatiles**Raw Data**

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159612.d
 Acq On : 18 Feb 2020 3:13 pm
 Operator : edwardd
 Sample : JD3298-1 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:11:29 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

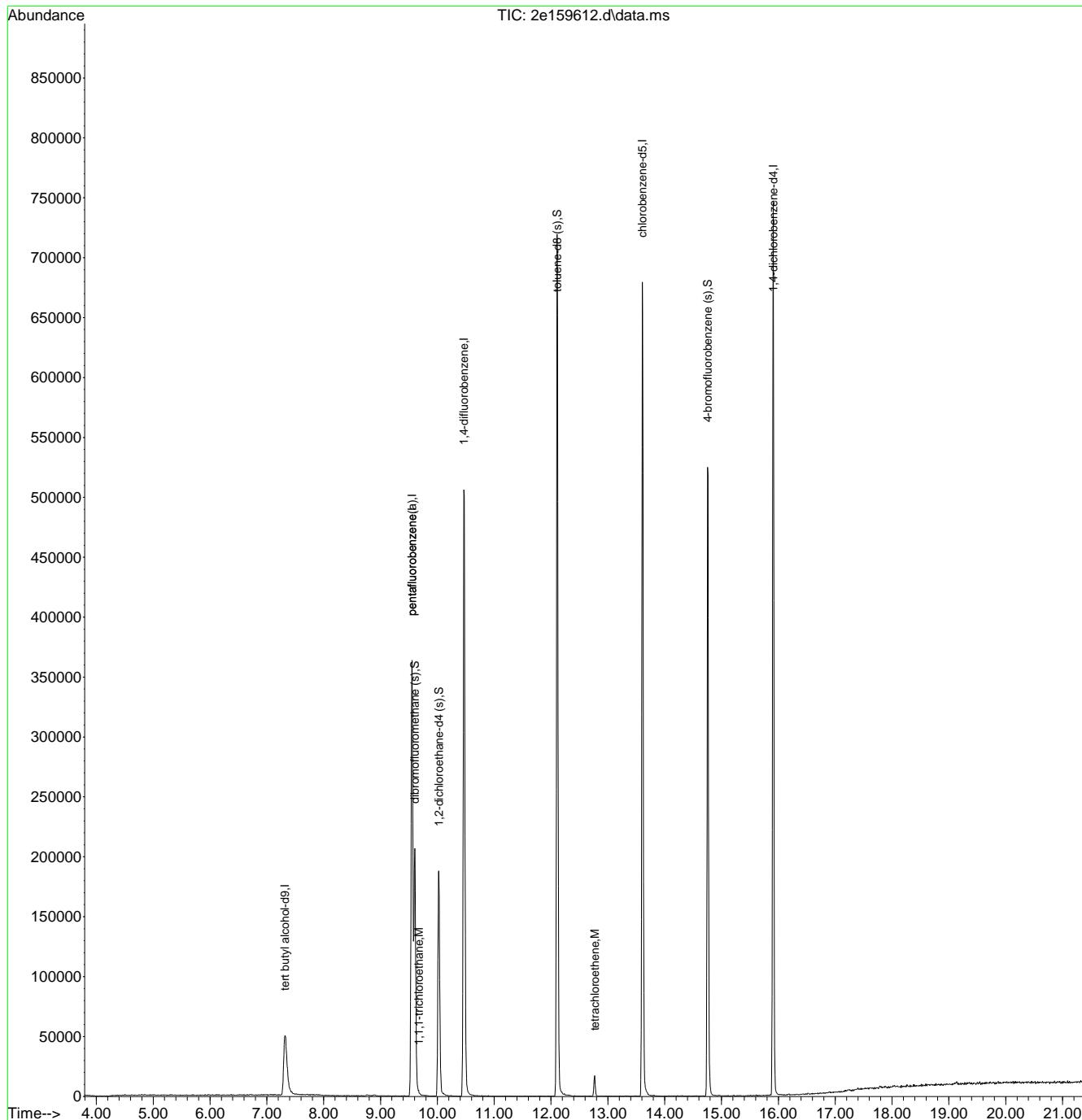
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.315	65	123180	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	308034	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.466	114	474852	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.607	117	391978	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	189371	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	308034	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	138550	50.83	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.66%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151649	53.07	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	106.14%	
76) toluene-d8 (s)	12.107	98	503106	46.47	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.94%	
99) 4-bromofluorobenzene (s)	14.755	95	183392	49.66	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.32%	
<hr/>						
Target Compounds						
50) 1,1,1-trichloroethane	9.669	97	1982	0.41	ug/L	88
81) tetrachloroethene	12.768	164	4310	1.70	ug/L	87

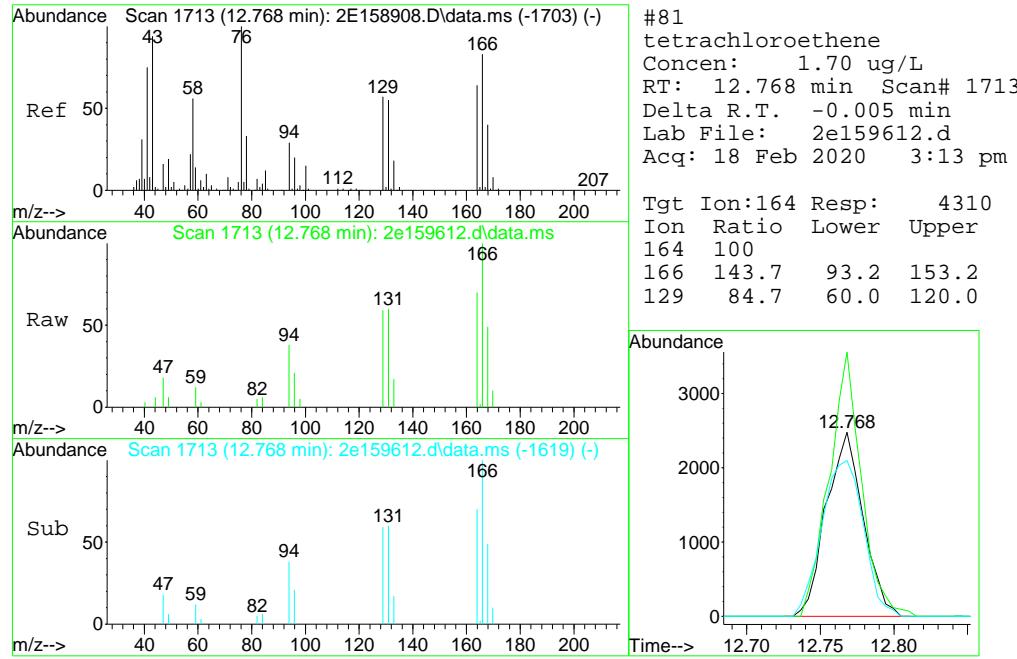
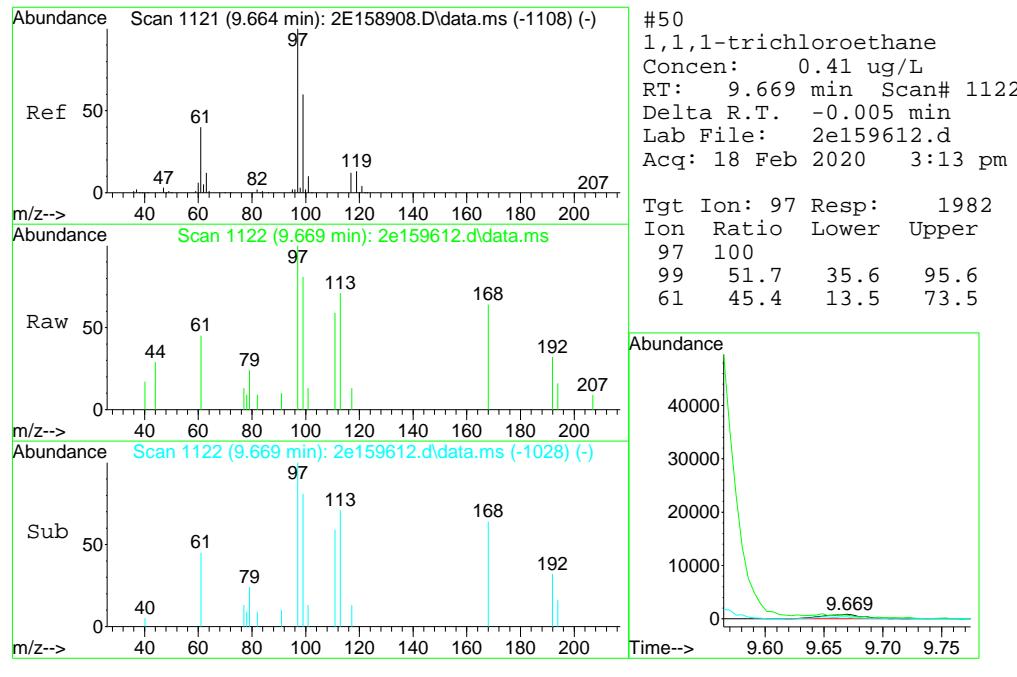
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159612.d
 Acq On : 18 Feb 2020 3:13 pm
 Operator : edwardd
 Sample : JD3298-1
 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,.1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:11:29 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159613.d
 Acq On : 18 Feb 2020 3:44 pm
 Operator : edwardd
 Sample : JD3298-2 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:12:47 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

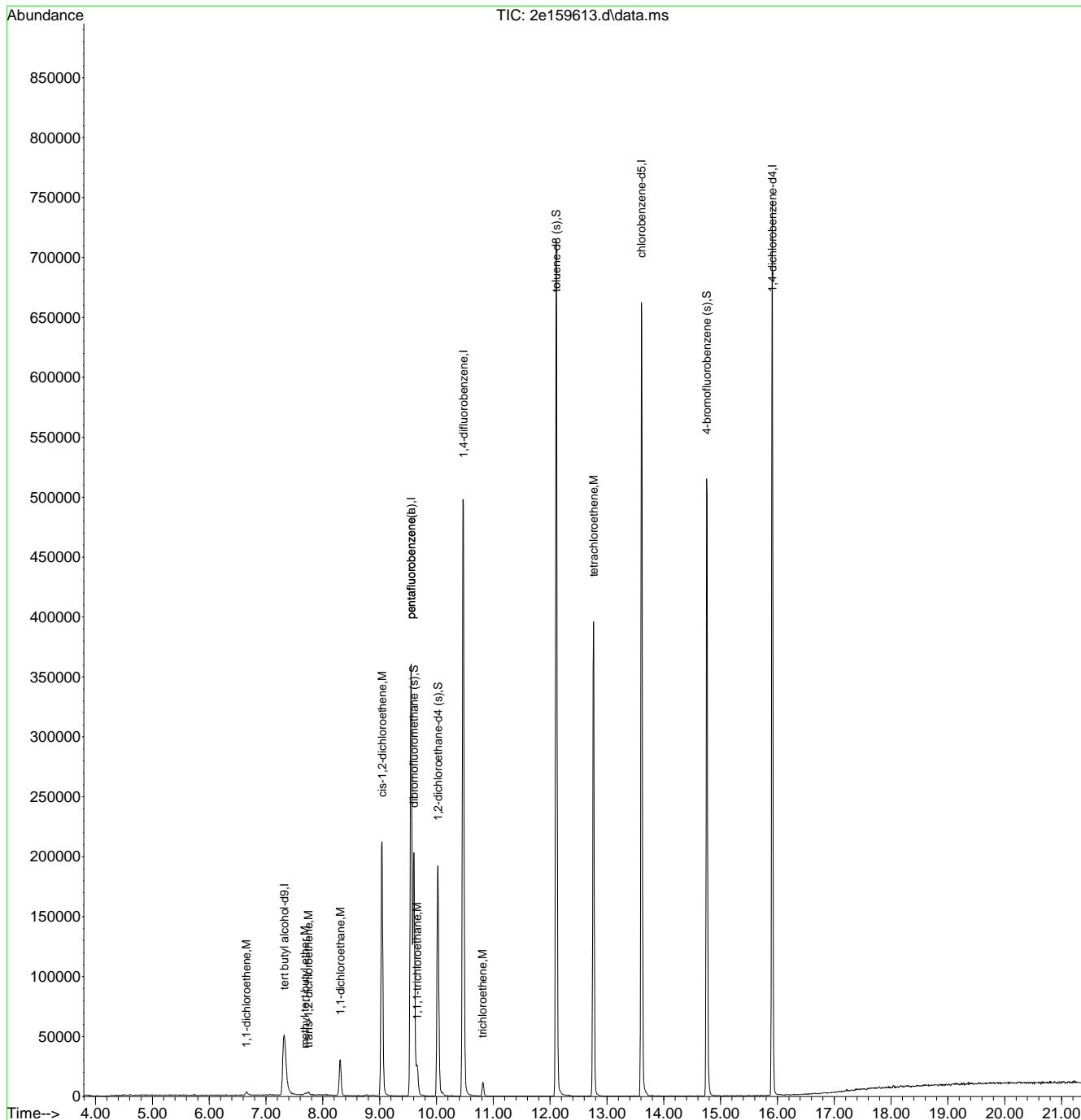
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	122308	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	300711	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	468212	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	383069	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	184506	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	300711	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	137966	51.85	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.70%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	152975	54.29	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.58%	
76) toluene-d8 (s)	12.108	98	493798	46.67	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.34%	
99) 4-bromofluorobenzene (s)	14.755	95	181524	50.45	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.90%	
<hr/>						
Target Compounds						
					Qvalue	
19) 1,1-dichloroethene	6.655	61	3032	0.66	ug/L	99
26) methyl tert butyl ether	7.682	73	2742	0.31	ug/L	82
27) trans-1,2-dichloroethene	7.745	61	1658	0.39	ug/L	89
32) 1,1-dichloroethane	8.306	63	37727	6.56	ug/L	99
38) cis-1,2-dichloroethene	9.040	96	112249	31.95	ug/L	84
50) 1,1,1-trichloroethane	9.659	97	19736	4.13	ug/L	97
63) trichloroethene	10.813	95	4578	1.47	ug/L	85
81) tetrachloroethene	12.763	164	96570	39.03	ug/L	93

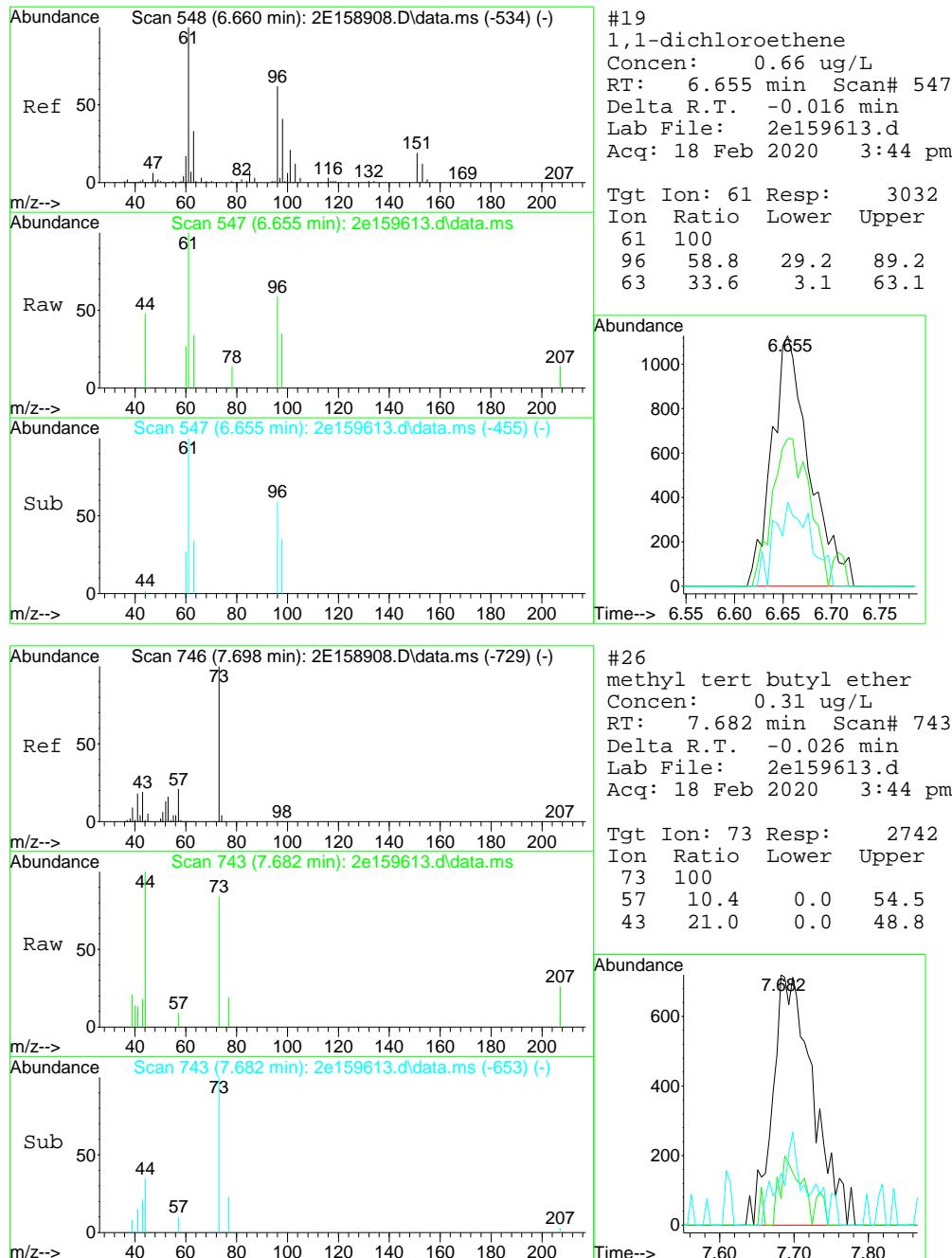
(#) = qualifier out of range (m) = manual integration (+) = signals summed

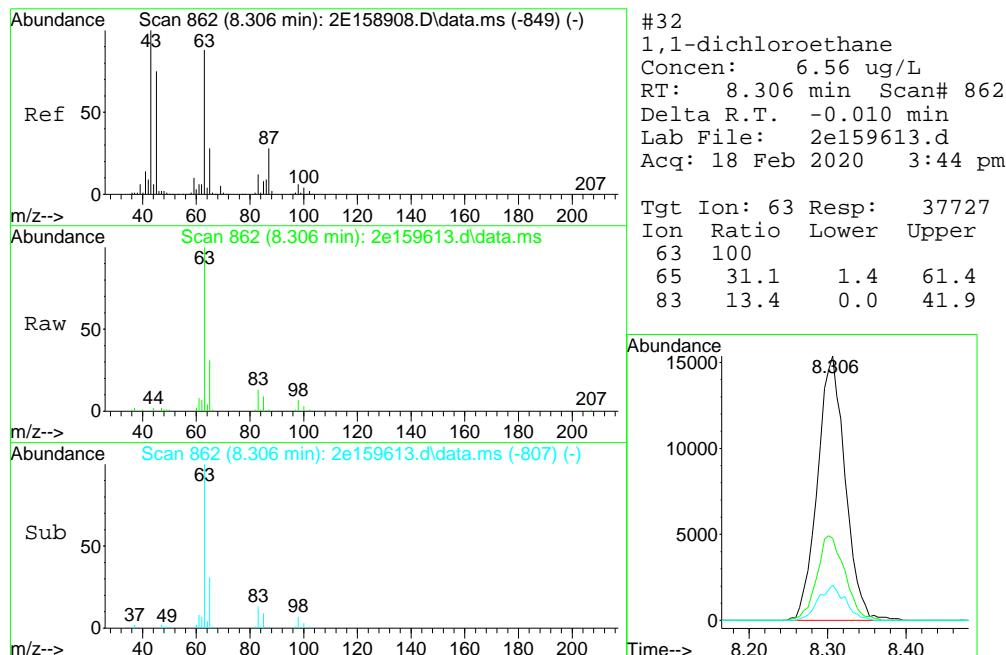
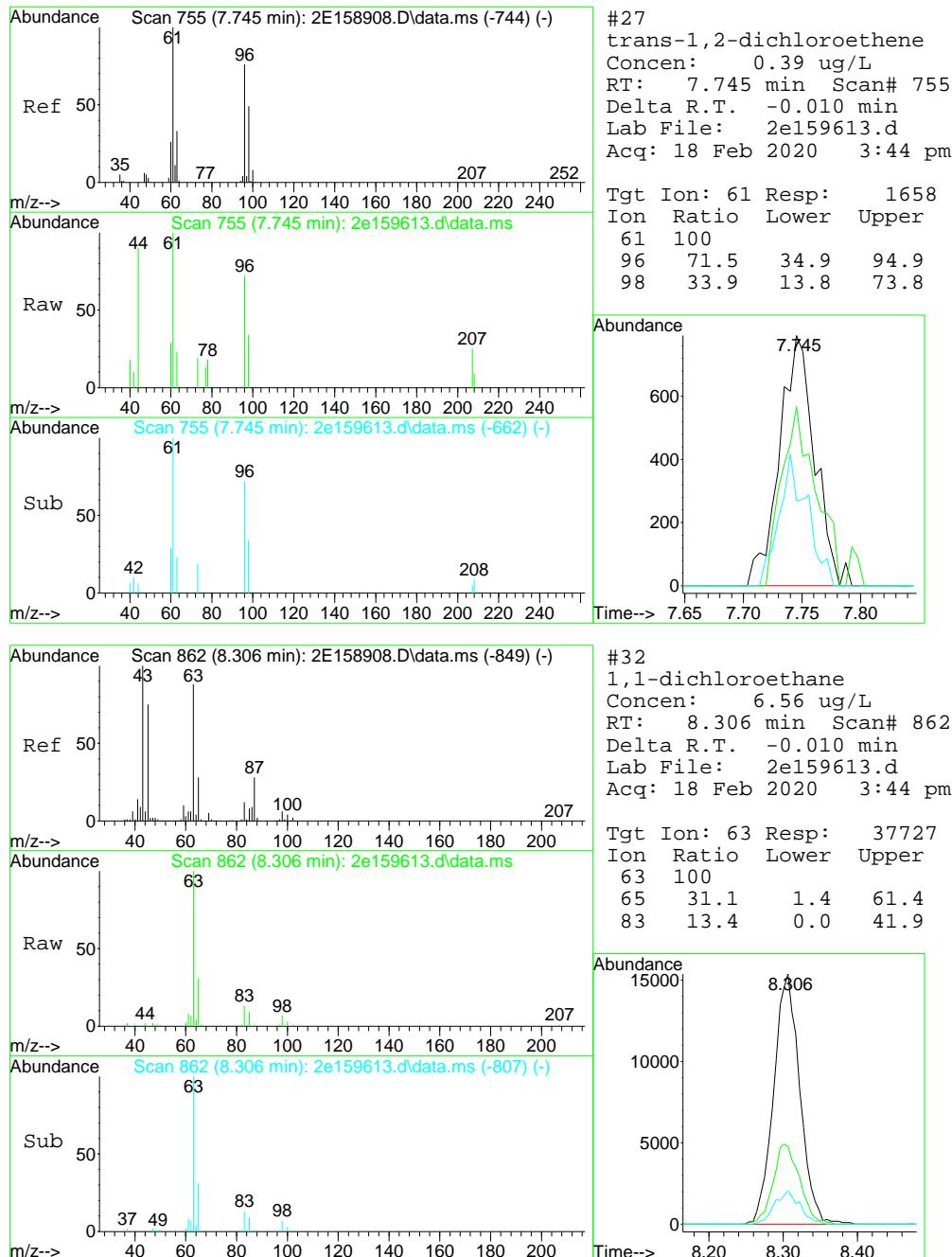
Quantitation Report (QT Reviewed)

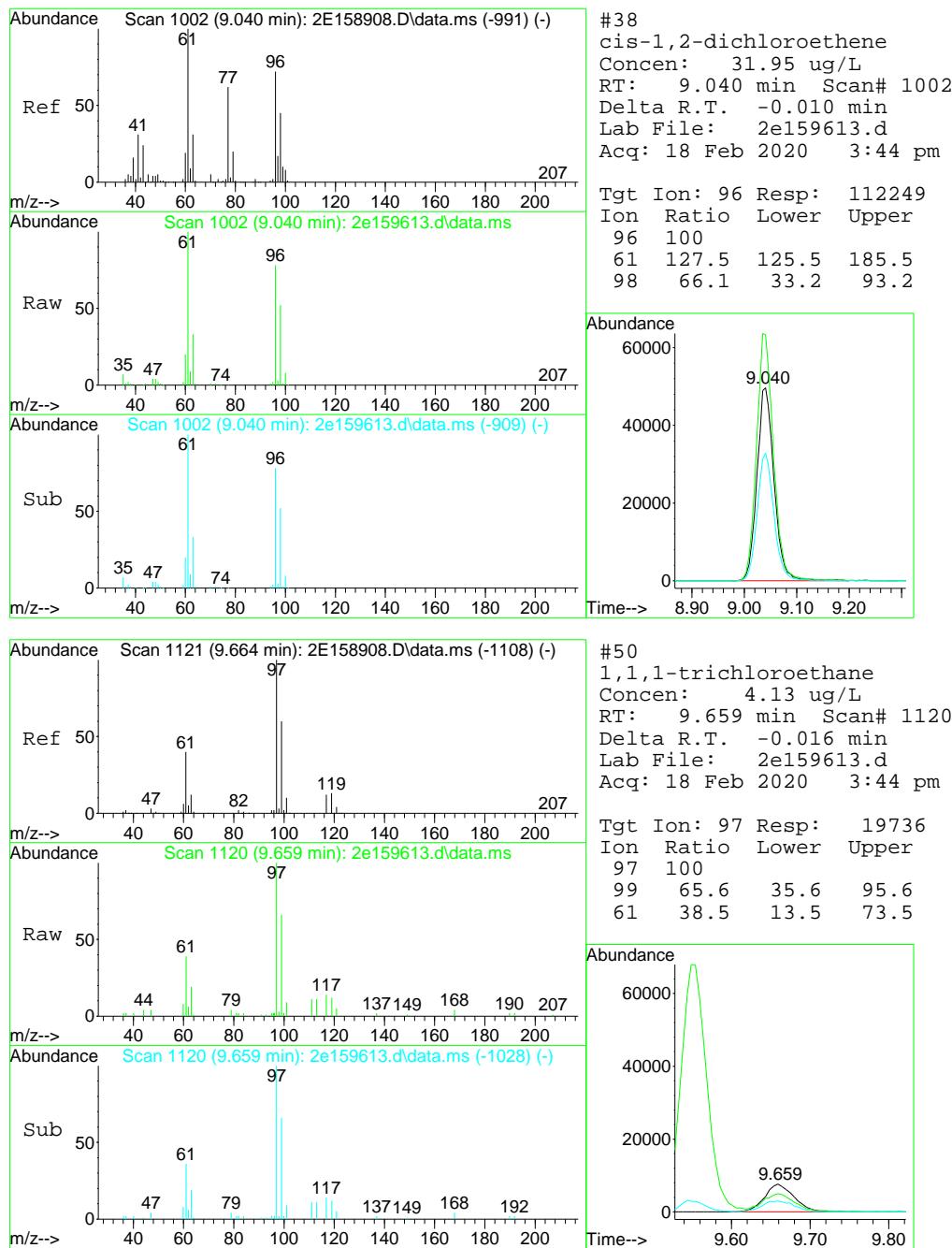
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 Data File : 2e159613.d
 Acq On : 18 Feb 2020 3:44 pm
 Operator : edwardd
 Sample : JD3298-2
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 17 Sample Multiplier: 1
 Inst : VOAMS2E

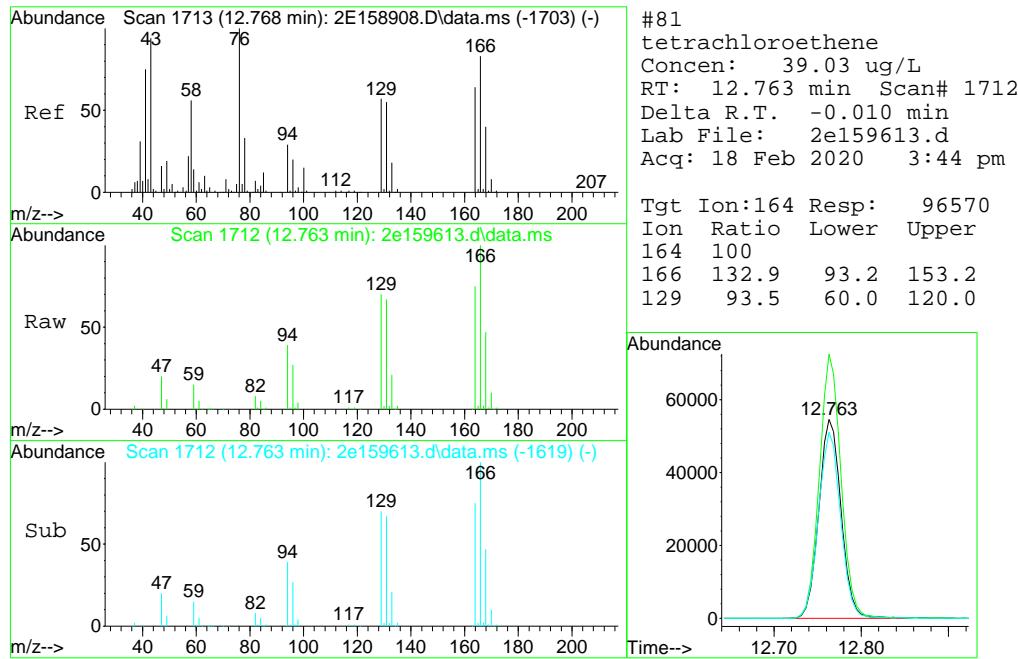
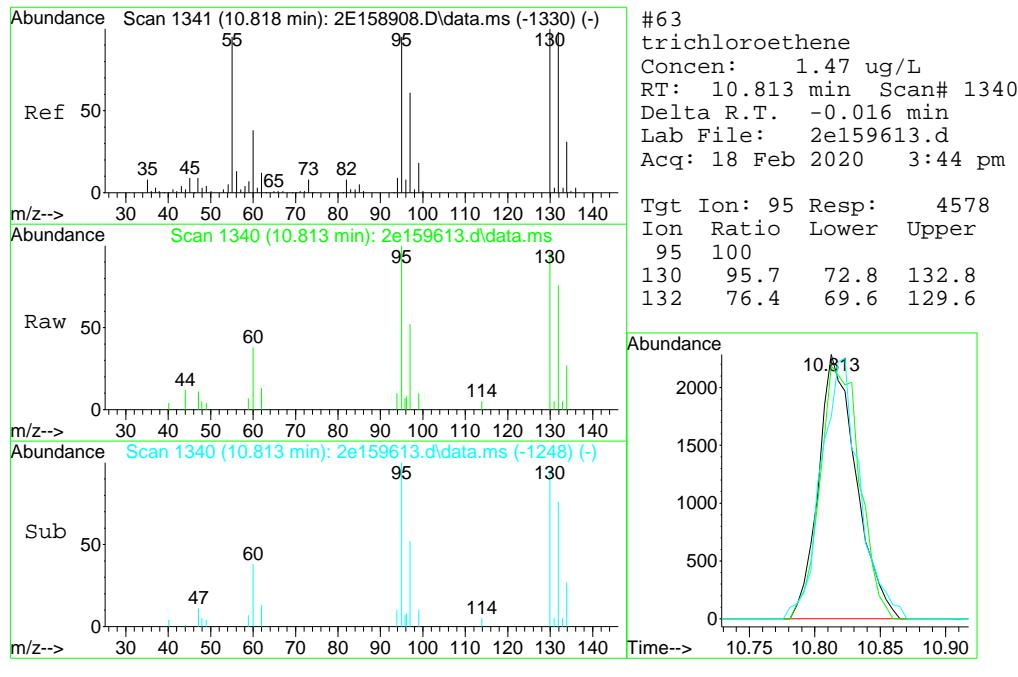
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:12:47 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration











Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159614.d
 Acq On : 18 Feb 2020 4:15 pm
 Operator : edwardd
 Sample : JD3298-3 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:13:36 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

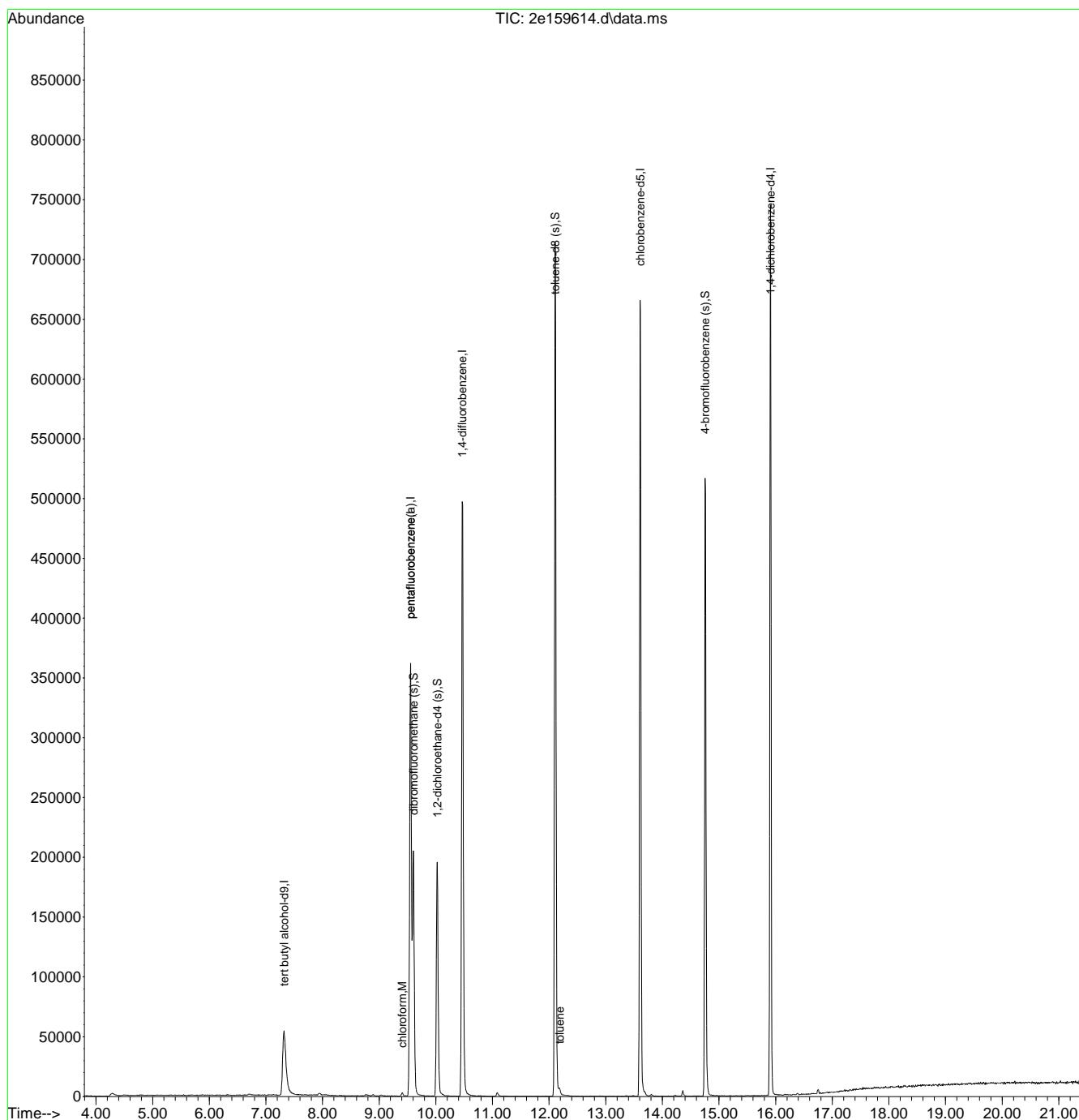
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	130155	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	303134	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.466	114	468384	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.612	117	385400	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	186838	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	303134	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	137935	51.42	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.84%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	152631	54.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.30%	
76) toluene-d8 (s)	12.108	98	495536	46.55	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.10%	
99) 4-bromofluorobenzene (s)	14.755	95	182604	50.12	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.24%	
<hr/>						
Target Compounds						
				Qvalue		
43) chloroform	9.407	83	2566	0.47	ug/L	94
77) toluene	12.186	92	1672	0.21	ug/L #	83

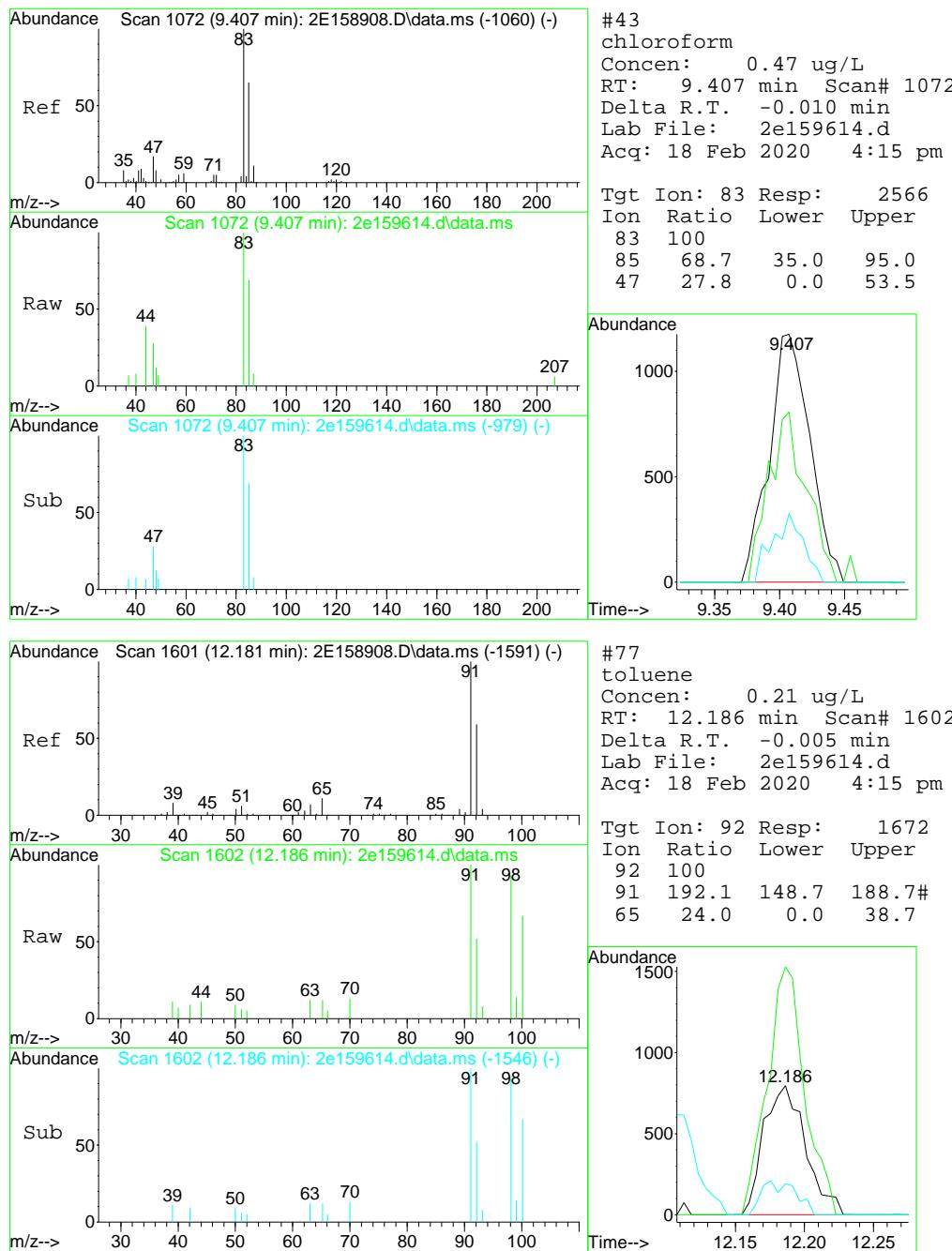
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159614.d
 Acq On : 18 Feb 2020 4:15 pm
 Operator : edwardd
 Sample : JD3298-3
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 18 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:13:36 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159615.d
 Acq On : 18 Feb 2020 4:45 pm
 Operator : edwardd
 Sample : JD3298-4 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:14:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

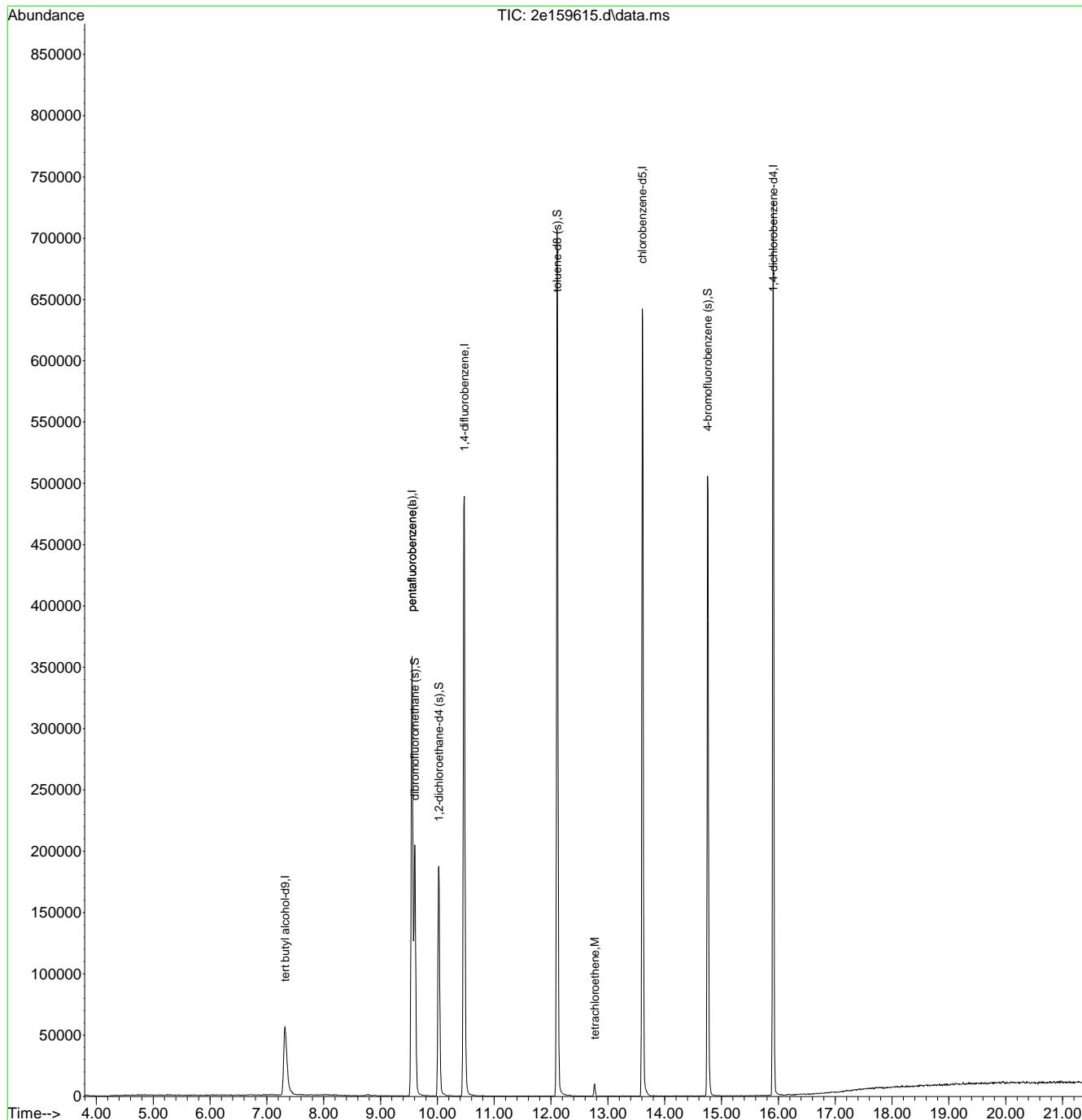
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	131342	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	299616	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	463603	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	375928	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	180954	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	299616	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	136600	51.52	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.04%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151971	54.47	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.94%	
76) toluene-d8 (s)	12.108	98	487259	46.93	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.86%	
99) 4-bromofluorobenzene (s)	14.755	95	177883	50.41	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.82%	
<hr/>						
Target Compounds						
81) tetrachloroethene	12.768	164	2545	1.05	ug/L	96
<hr/>						

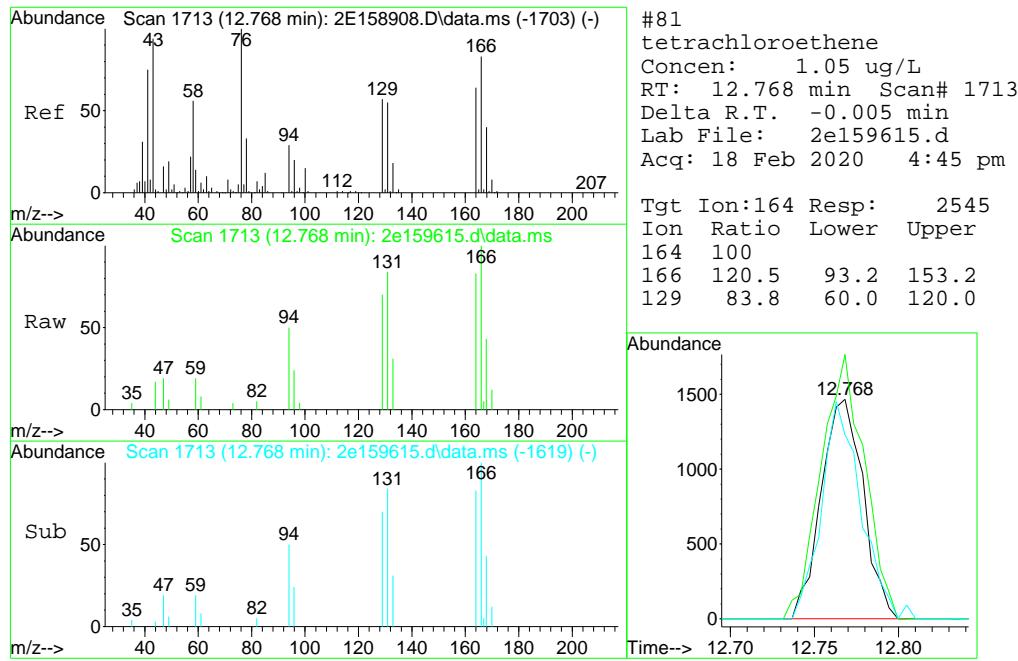
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159615.d
 Acq On : 18 Feb 2020 4:45 pm
 Operator : edwardd
 Sample : JD3298-4
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 19 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:14:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159616.d
 Acq On : 18 Feb 2020 5:16 pm
 Operator : edwardd
 Sample : JD3298-5 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:15:19 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

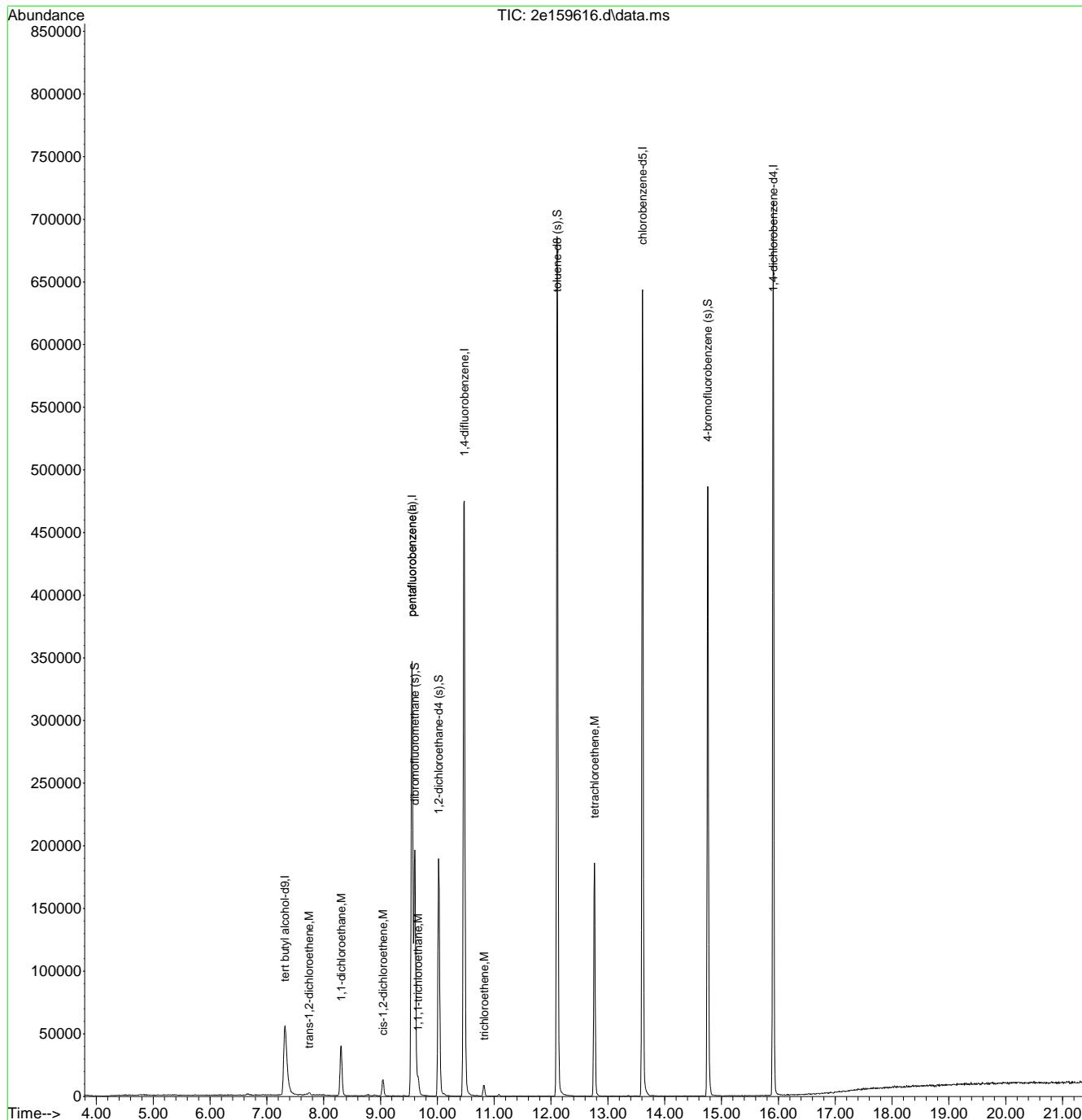
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.315	65	130418	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	288550	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	450095	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	368404	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	175543	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	288550	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	133964	52.46	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	104.92%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	147765	54.56	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.12%	
76) toluene-d8 (s)	12.108	98	476436	46.82	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.64%	
99) 4-bromofluorobenzene (s)	14.755	95	175235	51.19	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.38%	
<hr/>						
Target Compounds						
					Qvalue	
27) trans-1,2-dichloroethene	7.740	61	1604	0.39	ug/L	80
32) 1,1-dichloroethane	8.306	63	50718	9.19	ug/L	96
38) cis-1,2-dichloroethene	9.040	96	7140	2.12	ug/L #	77
50) 1,1,1-trichloroethane	9.659	97	10796	2.36	ug/L	90
63) trichloroethene	10.823	95	3707	1.24	ug/L	92
81) tetrachloroethene	12.763	164	45456	19.10	ug/L	97

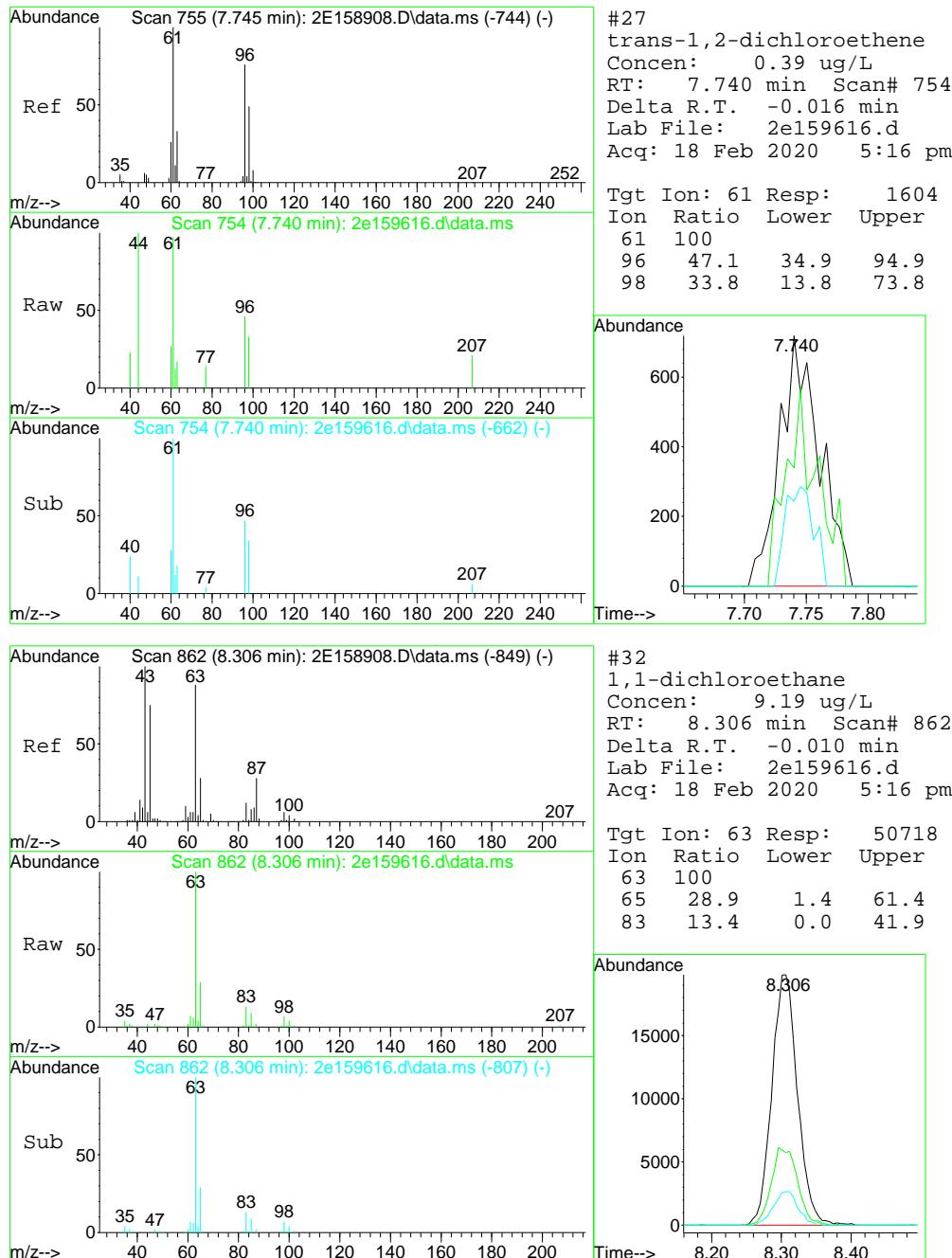
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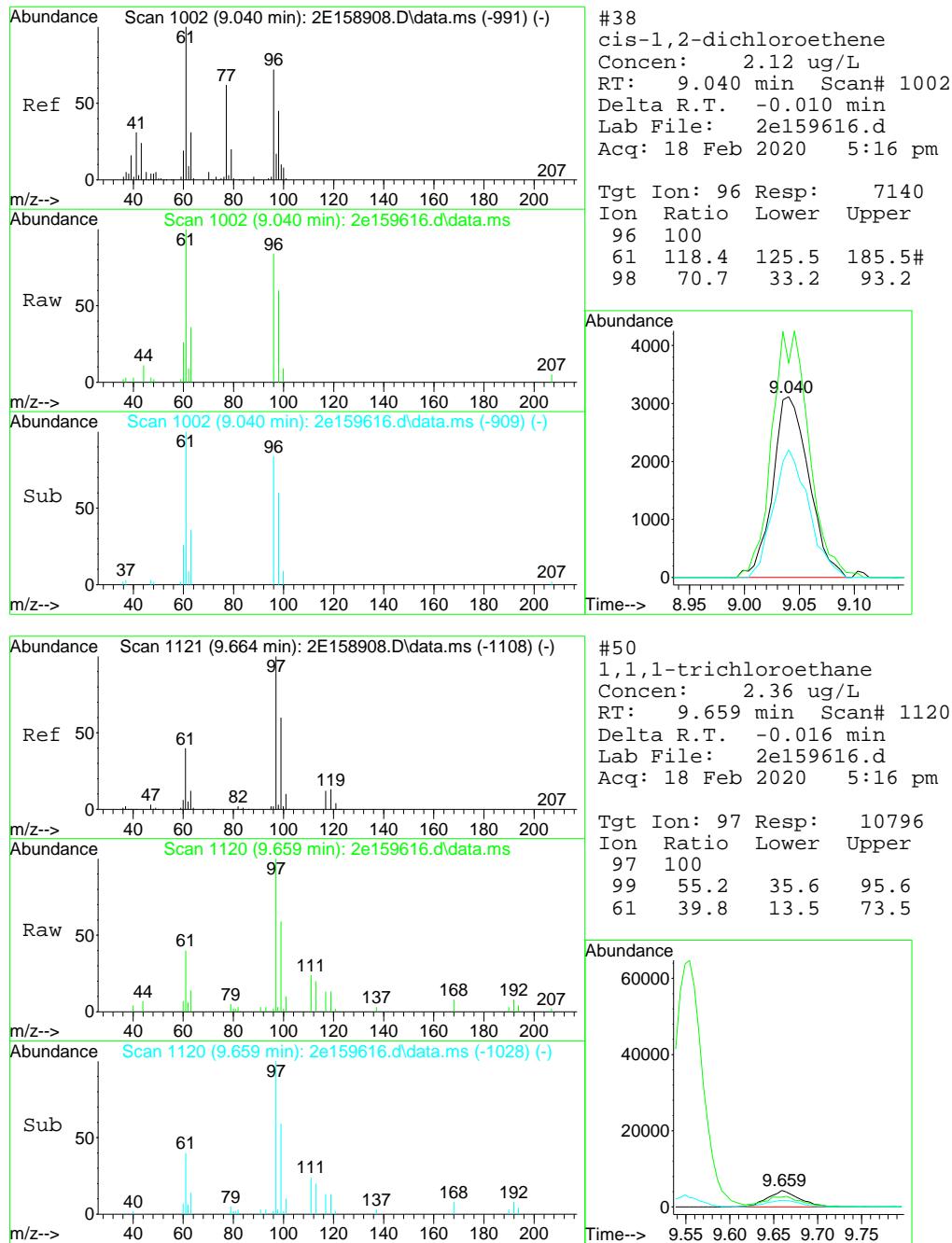
Quantitation Report (QT Reviewed)

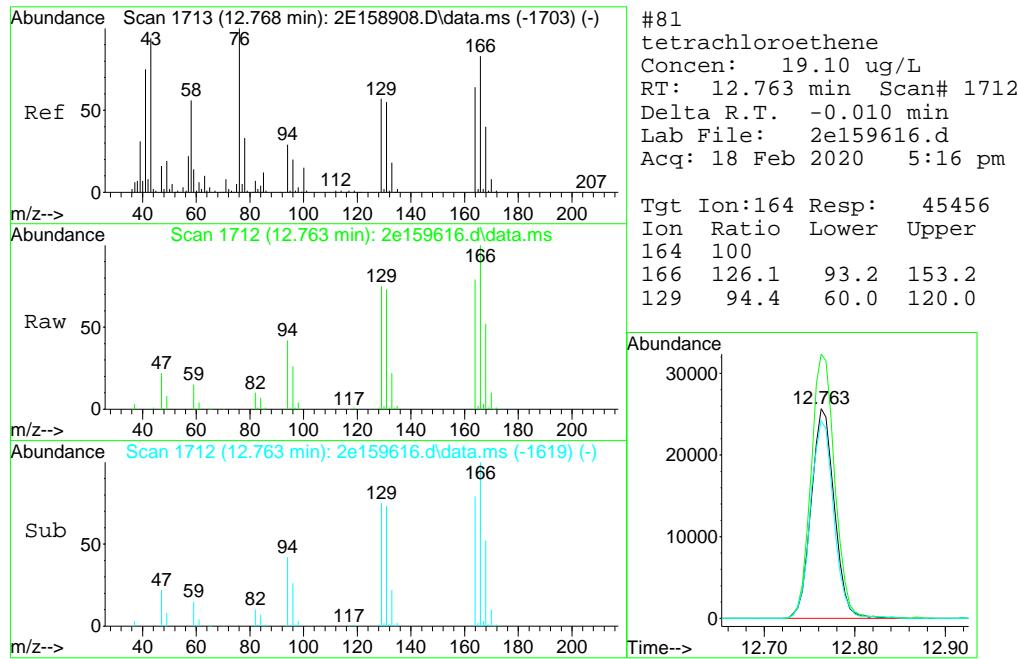
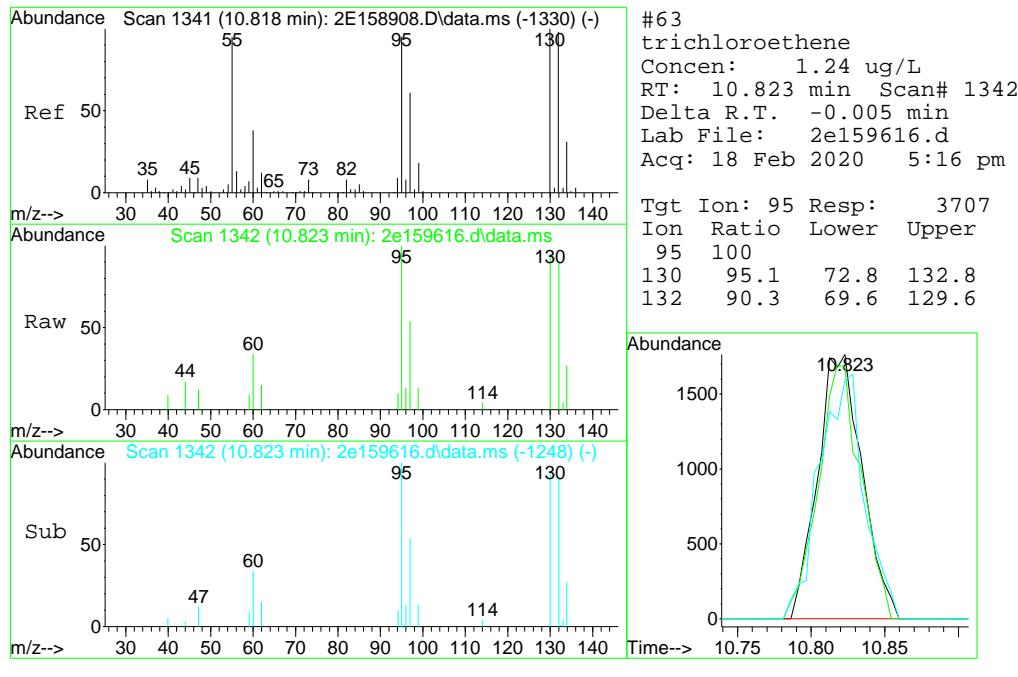
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 Data File : 2e159616.d
 Acq On : 18 Feb 2020 5:16 pm
 Operator : edwardd
 Sample : JD3298-5
 Misc : MS41200,V2E8003,5,,,.1
 ALS Vial : 20 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:15:19 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159626.d
 Acq On : 19 Feb 2020 9:31 am
 Operator : edwardd
 Sample : JD3298-6 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:34:06 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

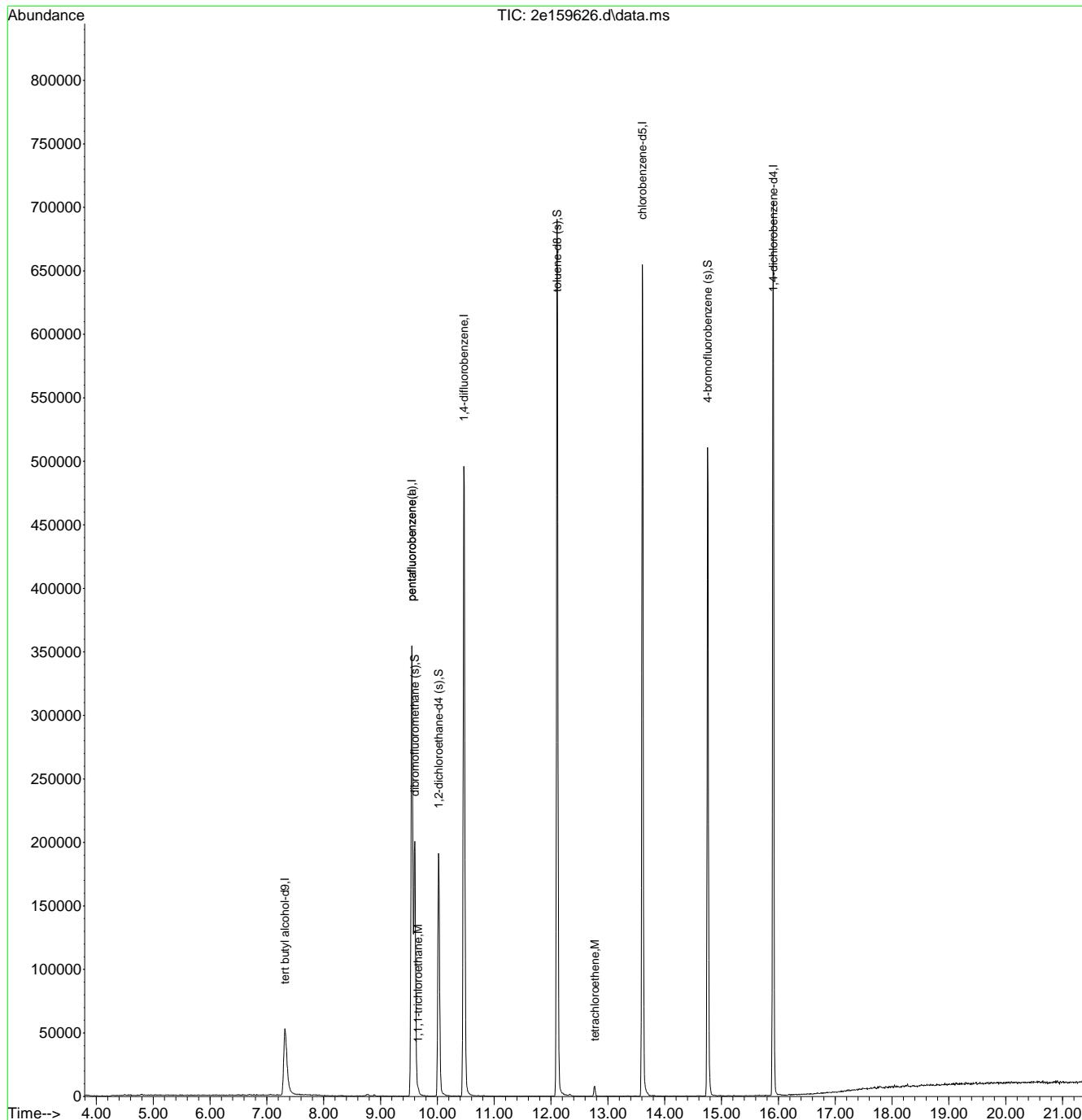
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.316	65	121877	500.00	ug/L	-0.02
5) pentafluorobenzene	9.549	168	294309	50.00	ug/L	-0.02
54) 1,4-difluorobenzene	10.467	114	457845	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.607	117	371800	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	178885	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.549	168	294309	50.00	ug/L	-0.02
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	137173	52.67	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.34%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	150400	54.59	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.18%	
76) toluene-d8 (s)	12.108	98	485027	47.23	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.46%	
99) 4-bromofluorobenzene (s)	14.755	95	175346	50.27	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.54%	
Target Compounds						
					Qvalue	
50) 1,1,1-trichloroethane	9.659	97	3458	0.74	ug/L	96
81) tetrachloroethene	12.768	164	2258	0.94	ug/L	95

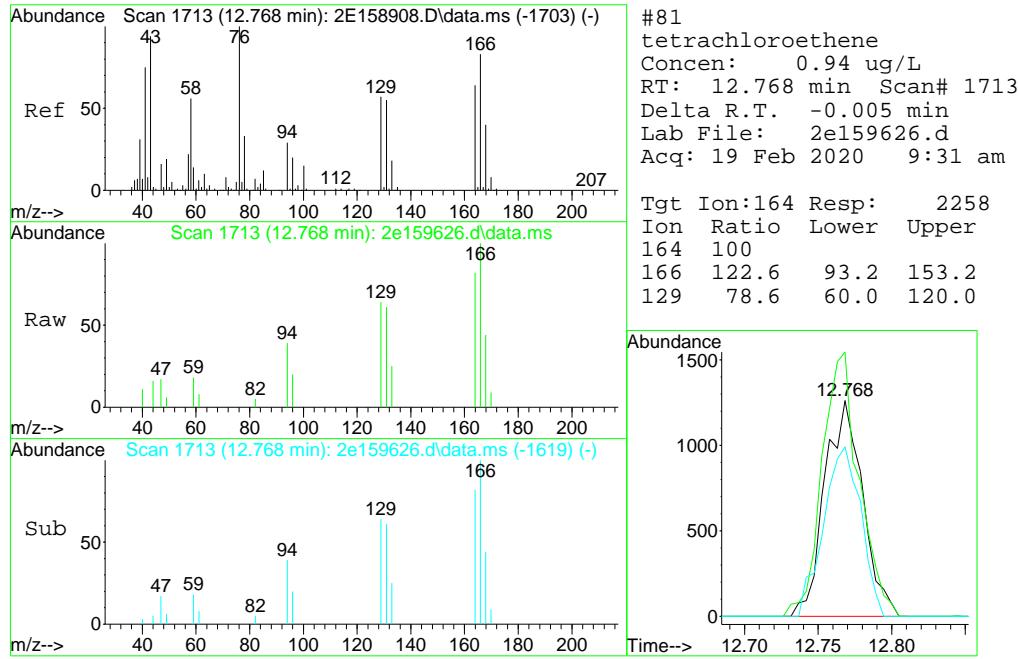
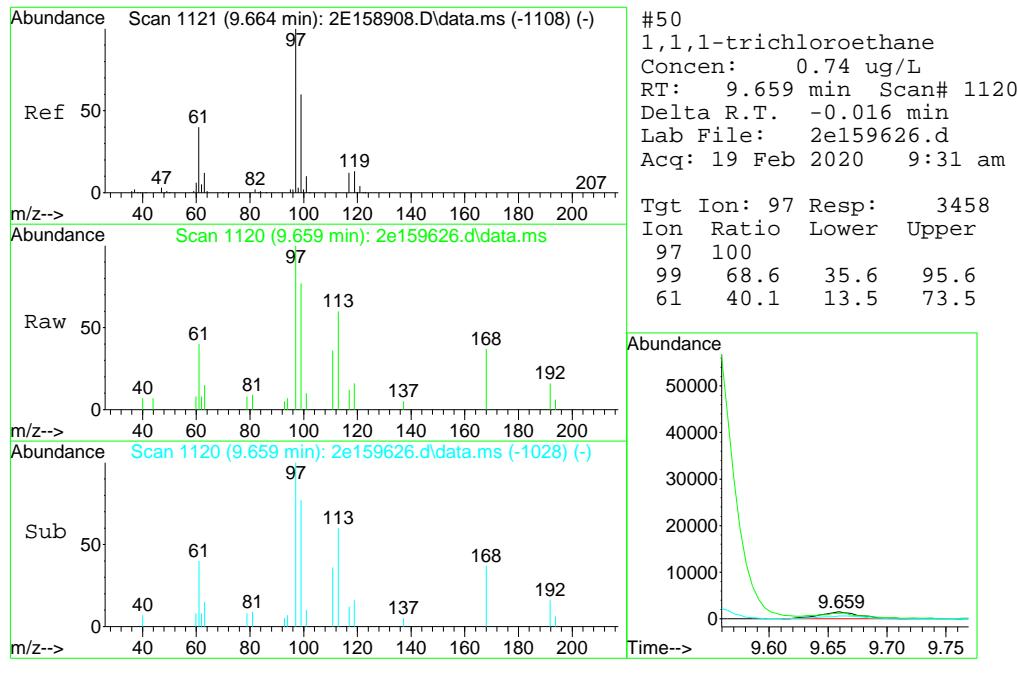
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159626.d
 Acq On : 19 Feb 2020 9:31 am
 Operator : edwardd
 Sample : JD3298-6
 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:34:06 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159617.d
 Acq On : 18 Feb 2020 5:46 pm
 Operator : edwardd
 Sample : JD3298-7 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:15:59 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

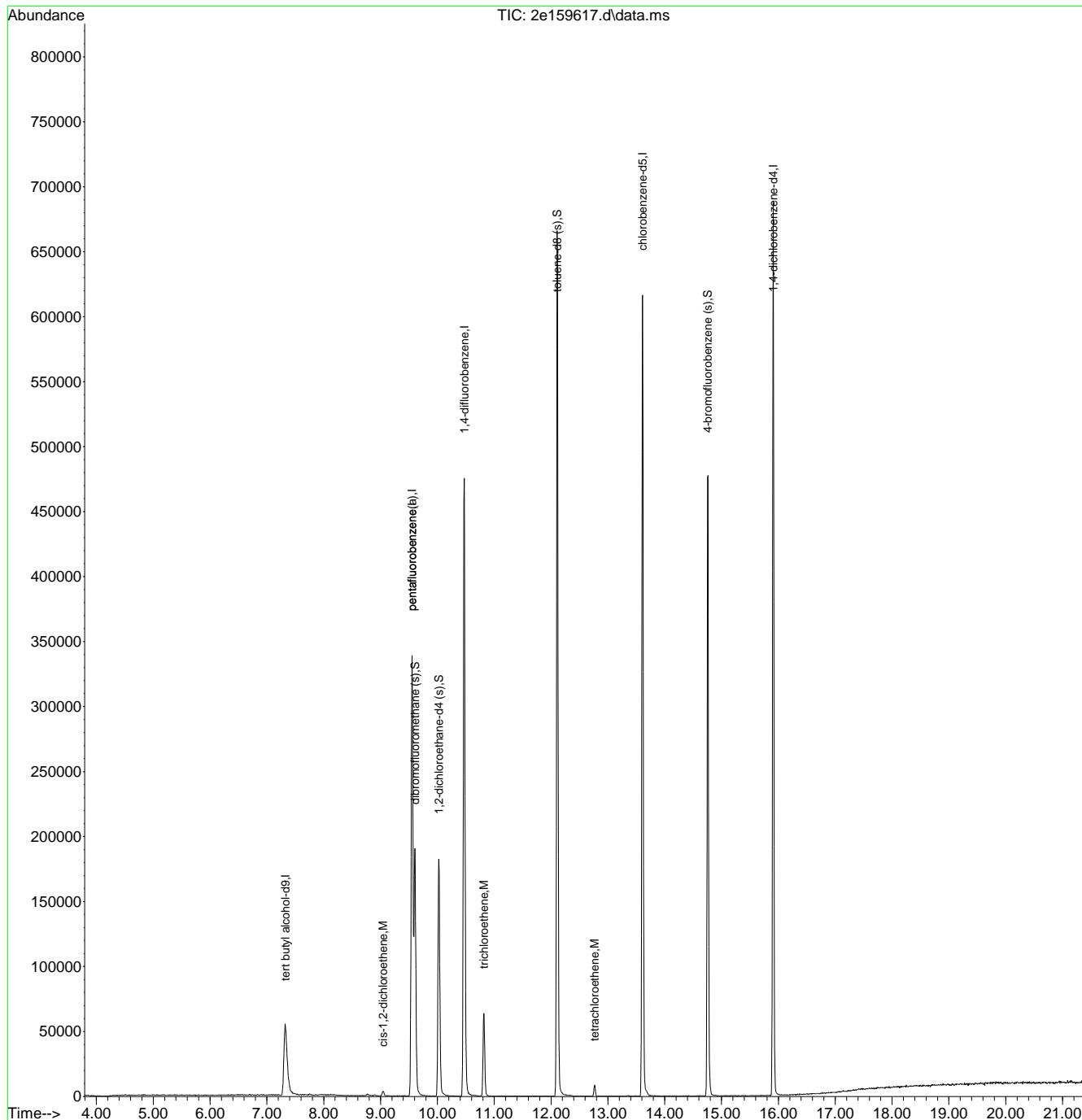
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	127036	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	277324	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	436986	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	356843	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	169972	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	277324	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.606	113	129963	52.96	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.92%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	146113	55.56	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	111.12%	
76) toluene-d8 (s)	12.107	98	463449	47.02	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.04%	
99) 4-bromofluorobenzene (s)	14.755	95	166791	50.32	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.64%	
<hr/>						
Target Compounds						
				Qvalue		
38) cis-1,2-dichloroethene	9.045	96	2165	0.67	ug/L	79
63) trichloroethene	10.818	95	24769	8.53	ug/L	94
81) tetrachloroethene	12.763	164	2072	0.90	ug/L	88

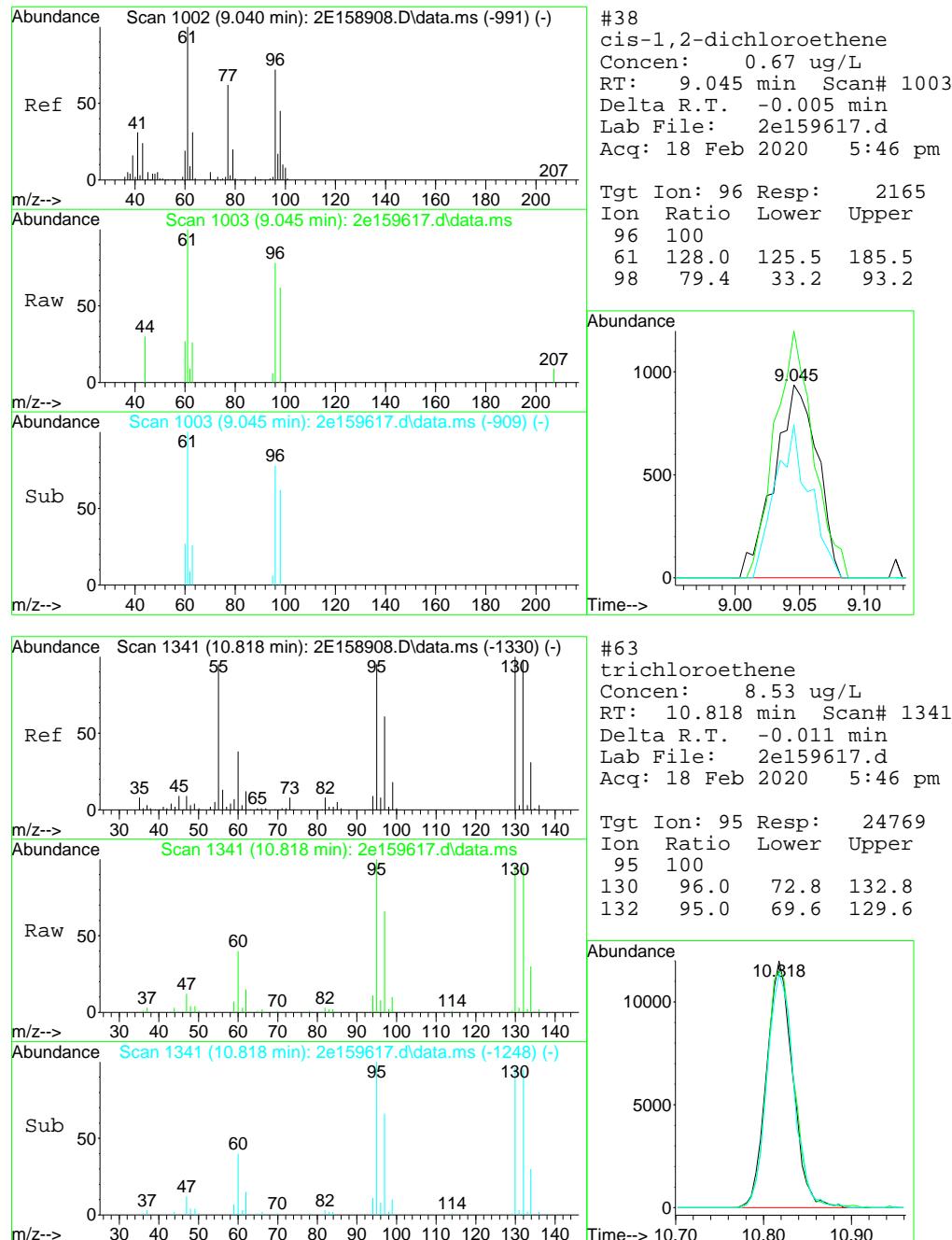
(#) = qualifier out of range (m) = manual integration (+) = signals summed

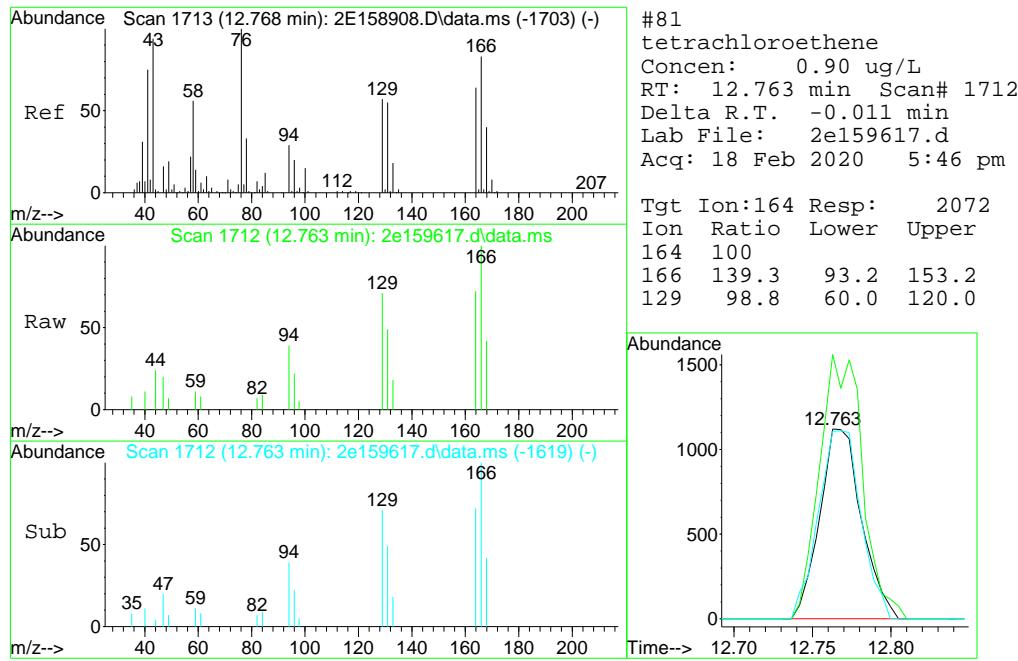
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159617.d
 Acq On : 18 Feb 2020 5:46 pm
 Operator : edwardd
 Sample : JD3298-7
 Misc : MS41200,V2E8003,5,,,.1
 ALS Vial : 21 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:15:59 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159618.d
 Acq On : 18 Feb 2020 6:17 pm
 Operator : edwardd
 Sample : JD3298-8 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:16:53 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

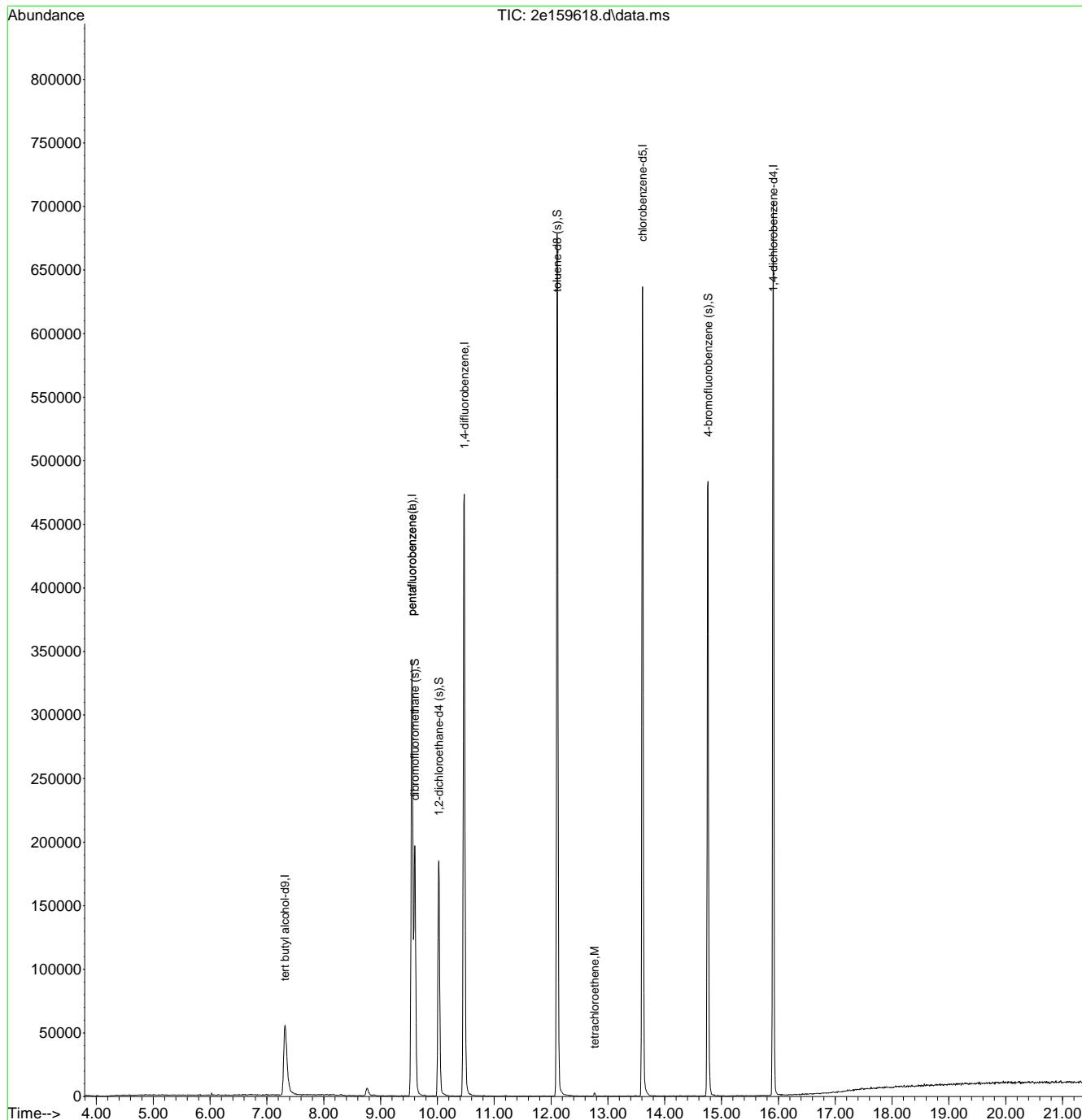
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.315	65	129162	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	284905	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	442286	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	362443	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	172523	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	284905	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	134553	53.37	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.74%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	146577	55.07	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.14%	
76) toluene-d8 (s)	12.107	98	470313	46.98	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.96%	
99) 4-bromofluorobenzene (s)	14.760	95	171486	50.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.94%	
<hr/>						
Target Compounds						
81) tetrachloroethene	12.763	164	608	0.26	ug/L	90
<hr/>						

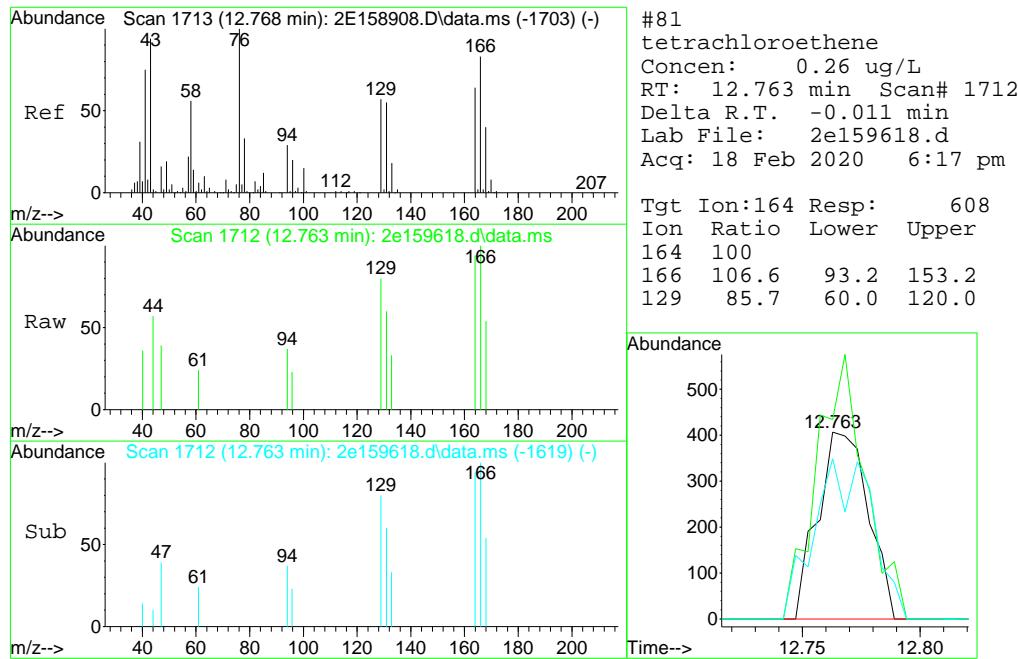
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159618.d
 Acq On : 18 Feb 2020 6:17 pm
 Operator : edwardd
 Sample : JD3298-8
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 22 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:16:53 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159619.d
 Acq On : 18 Feb 2020 6:47 pm
 Operator : edwardd
 Sample : JD3298-9 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:17:42 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

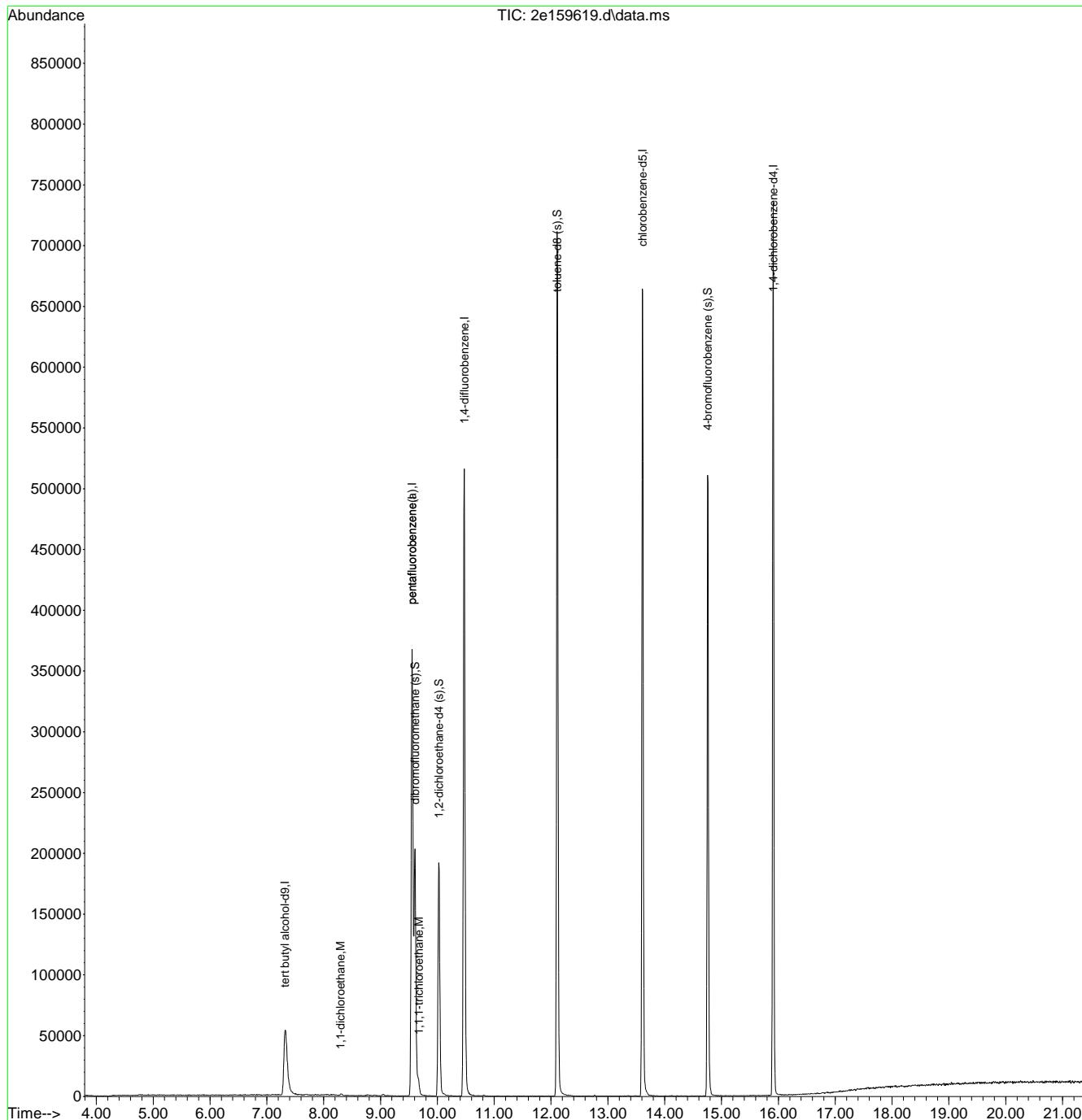
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.315	65	131381	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	303509	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	471643	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	382257	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	184088	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	303509	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	140365	52.26	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	104.52%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	154196	54.33	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.66%	
76) toluene-d8 (s)	12.108	98	499736	47.33	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.66%	
99) 4-bromofluorobenzene (s)	14.755	95	179233	49.93	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.86%	
<hr/>						
Target Compounds						
				Qvalue		
32) 1,1-dichloroethane	8.296	63	2099	0.36	ug/L	86
50) 1,1,1-trichloroethane	9.669	97	10911	2.26	ug/L	88

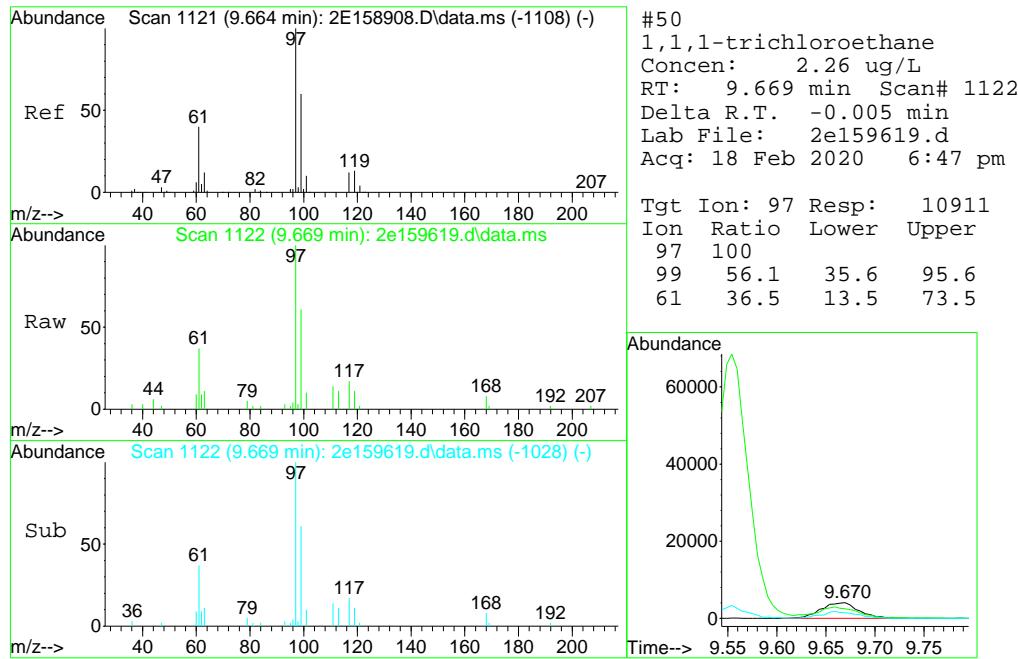
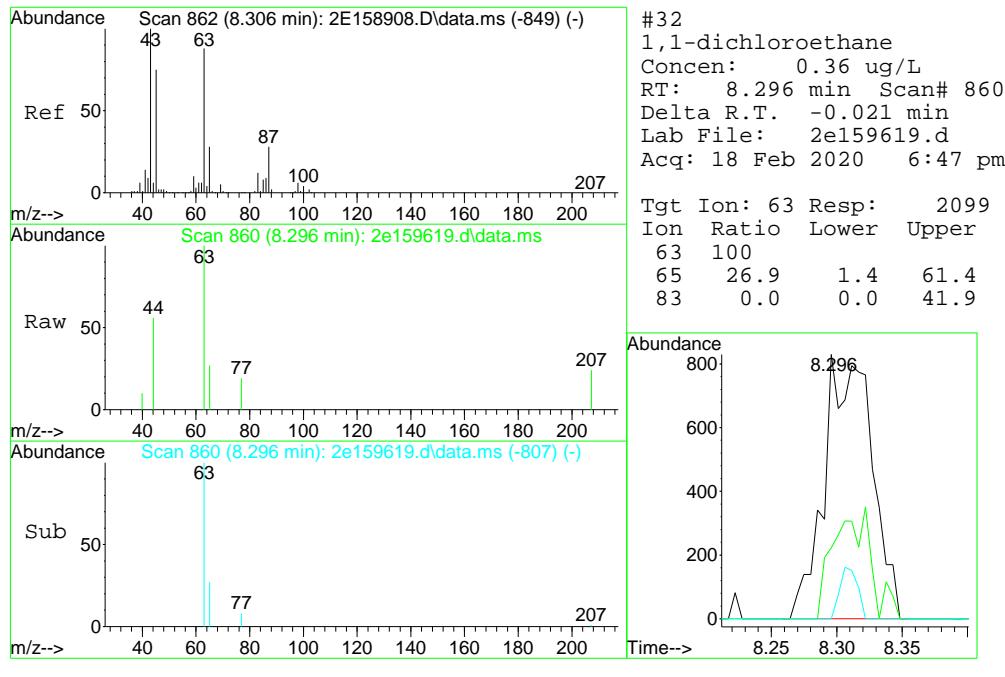
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159619.d
 Acq On : 18 Feb 2020 6:47 pm
 Operator : edwardd
 Sample : JD3298-9
 Misc : MS41200,V2E8003,5,,,.1
 ALS Vial : 23 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:17:42 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159620.d
 Acq On : 18 Feb 2020 7:18 pm
 Operator : edwardd
 Sample : JD3298-10 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:18:26 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

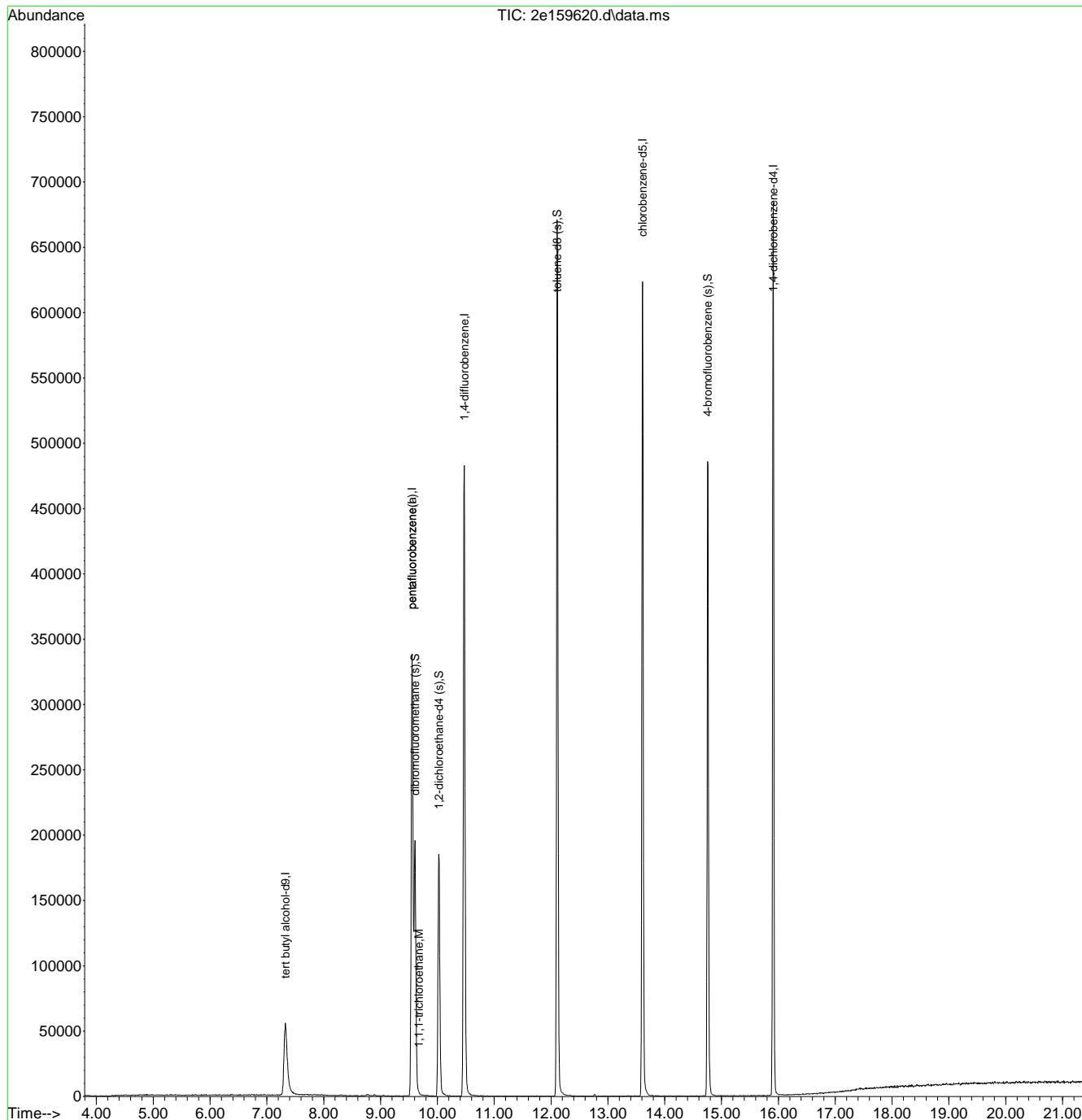
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	127963	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	281022	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	441887	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	360804	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	171022	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	281022	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.606	113	133828	53.81	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	107.62%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	147544	55.49	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.98%	
76) toluene-d8 (s)	12.107	98	468855	47.05	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.10%	
99) 4-bromofluorobenzene (s)	14.755	95	169211	50.74	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.48%	
<hr/>						
Target Compounds						
50) 1,1,1-trichloroethane	9.675	97	1697	0.38	ug/L #	73
<hr/>						

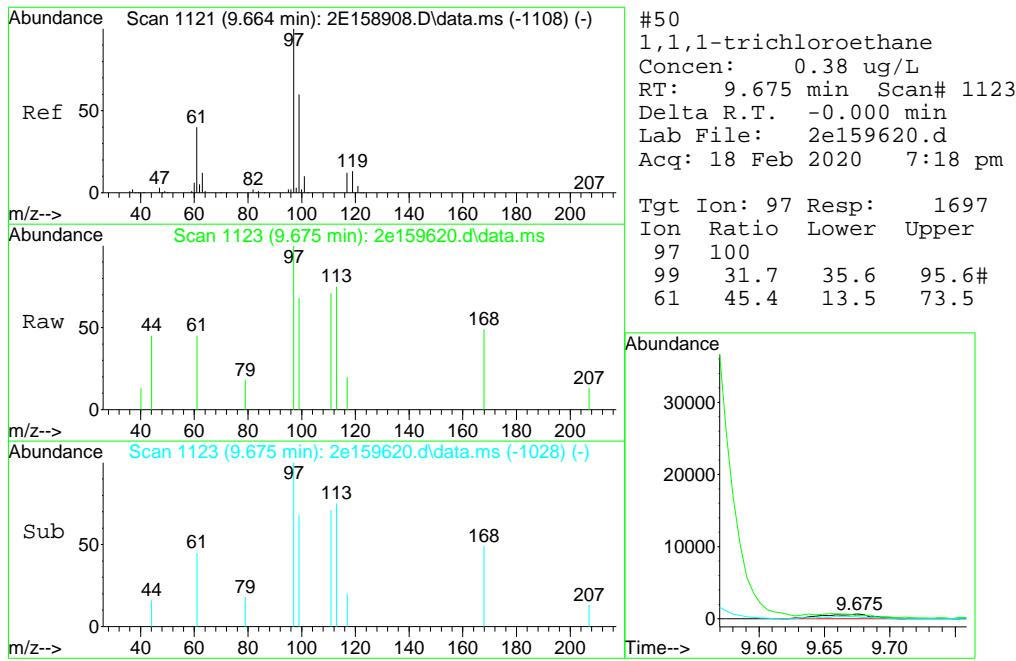
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159620.d
 Acq On : 18 Feb 2020 7:18 pm
 Operator : edwardd
 Sample : JD3298-10 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:18:26 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159628.d
 Acq On : 19 Feb 2020 10:32 am
 Operator : edwardd
 Sample : JD3298-11 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:38:26 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

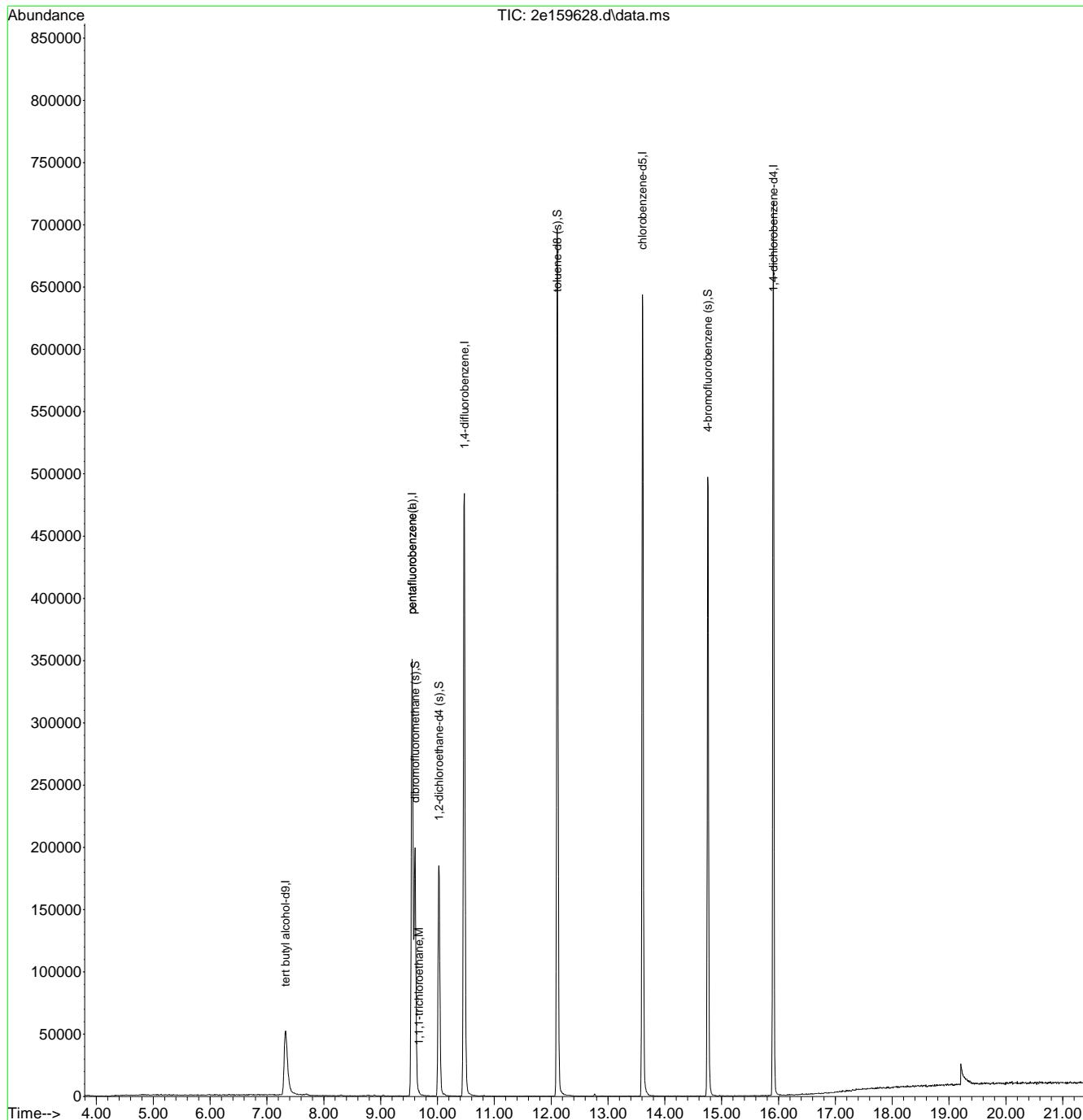
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	125579	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	294158	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	457659	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	371375	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	176360	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	294158	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	136293	52.36	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	104.72%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	147862	53.69	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	107.38%	
76) toluene-d8 (s)	12.107	98	478508	46.65	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.30%	
99) 4-bromofluorobenzene (s)	14.755	95	173221	50.37	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.74%	
<hr/>						
Target Compounds						
50) 1,1,1-trichloroethane	9.669	97	2126	0.46	ug/L	83
<hr/>						

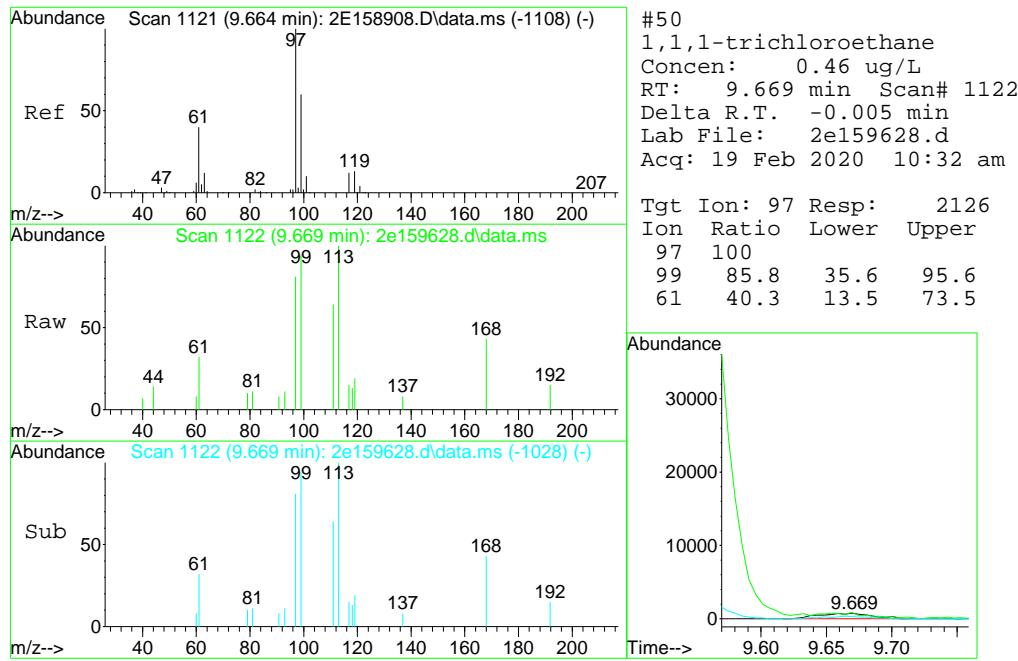
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159628.d
 Acq On : 19 Feb 2020 10:32 am
 Operator : edwardd
 Sample : JD3298-11 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:38:26 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159604.d
 Acq On : 18 Feb 2020 11:12 am
 Operator : edwardd
 Sample : JD3298-12 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:52:34 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

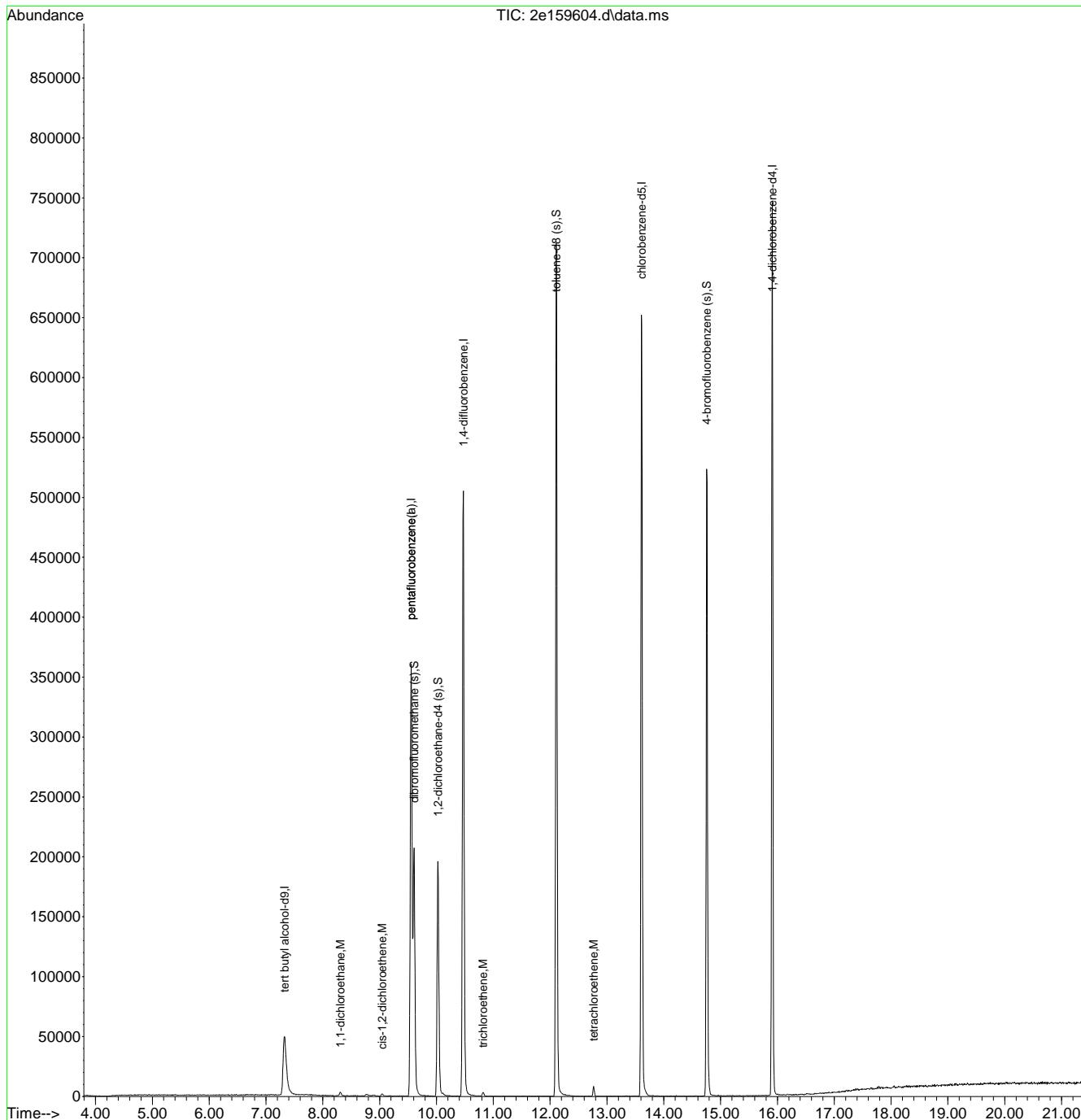
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	117908	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	302958	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	471309	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	384223	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	187912	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	302958	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	140909	52.56	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.12%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	152934	53.92	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	107.84%	
76) toluene-d8 (s)	12.108	98	496240	46.76	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.52%	
99) 4-bromofluorobenzene (s)	14.755	95	180858	49.36	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.72%	
<hr/>						
Target Compounds						
				Qvalue		
32) 1,1-dichloroethane	8.306	63	3618	0.62	ug/L	92
38) cis-1,2-dichloroethene	9.046	96	987	0.28	ug/L	# 73
63) trichloroethene	10.818	95	1152	0.37	ug/L	81
81) tetrachloroethene	12.763	164	2051	0.83	ug/L	85

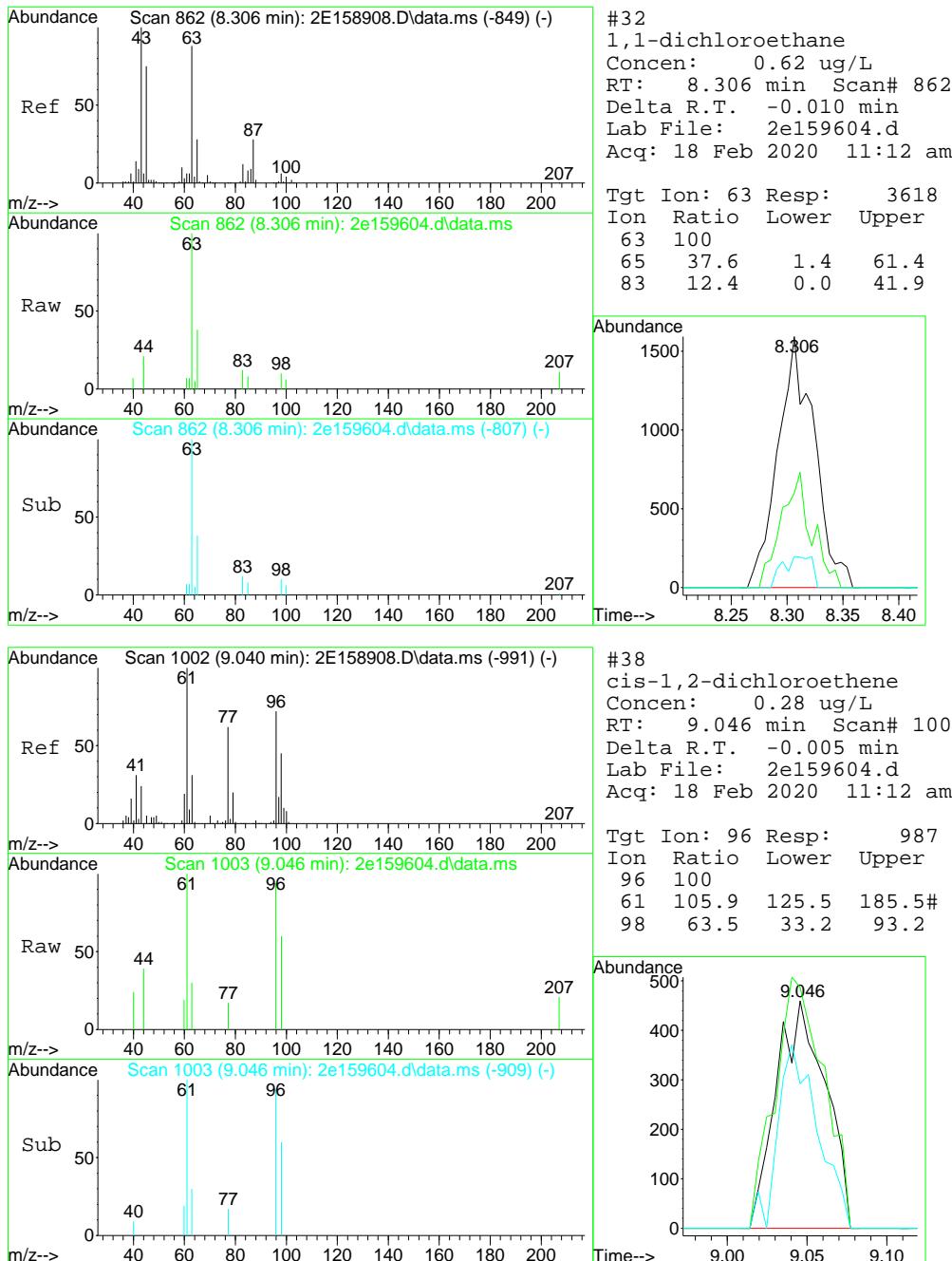
(#) = qualifier out of range (m) = manual integration (+) = signals summed

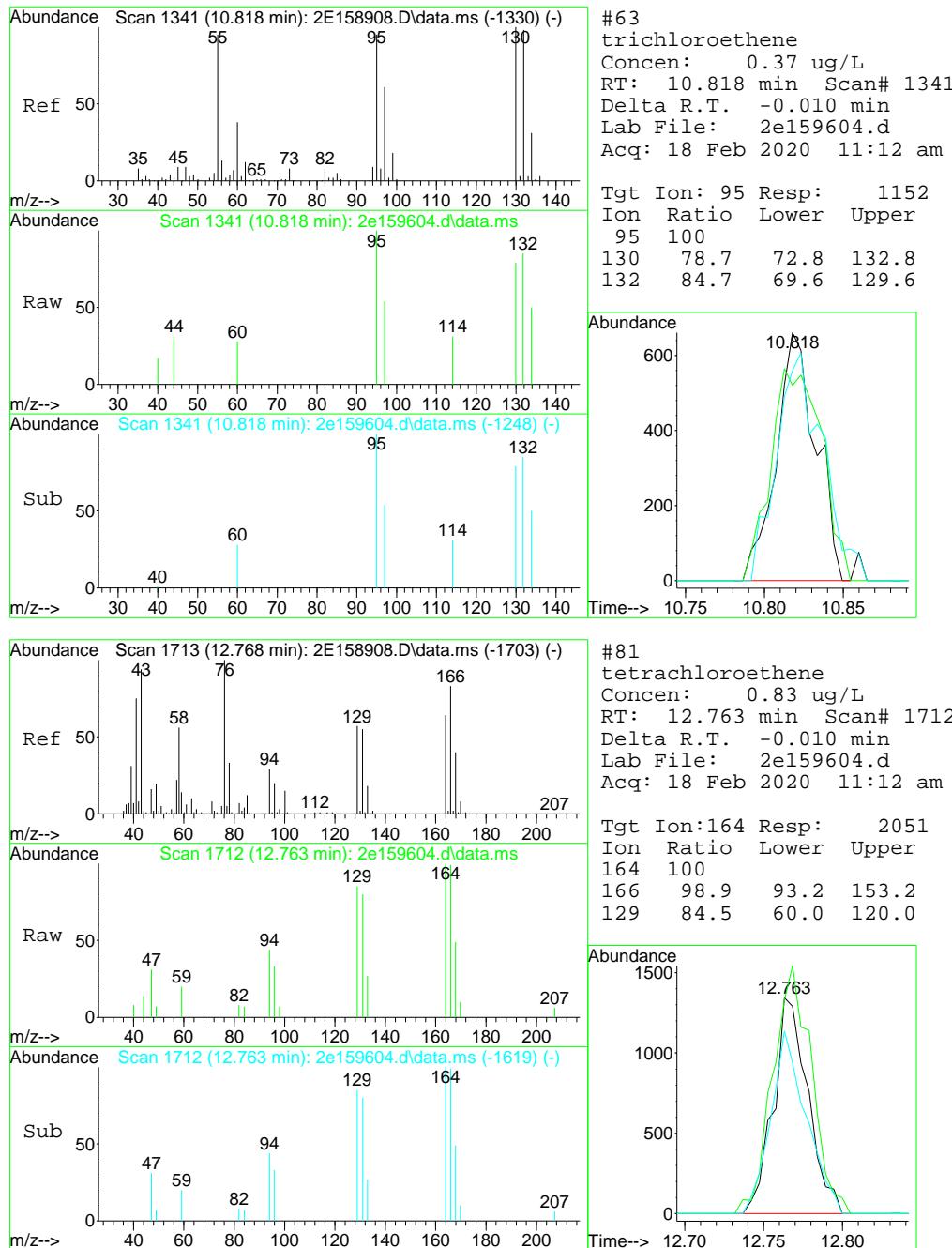
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159604.d
 Acq On : 18 Feb 2020 11:12 am
 Operator : edwardd
 Sample : JD3298-12 Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:52:34 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159637.d
 Acq On : 19 Feb 2020 3:06 pm
 Operator : edwardd
 Sample : JD3298-14 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:48:47 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

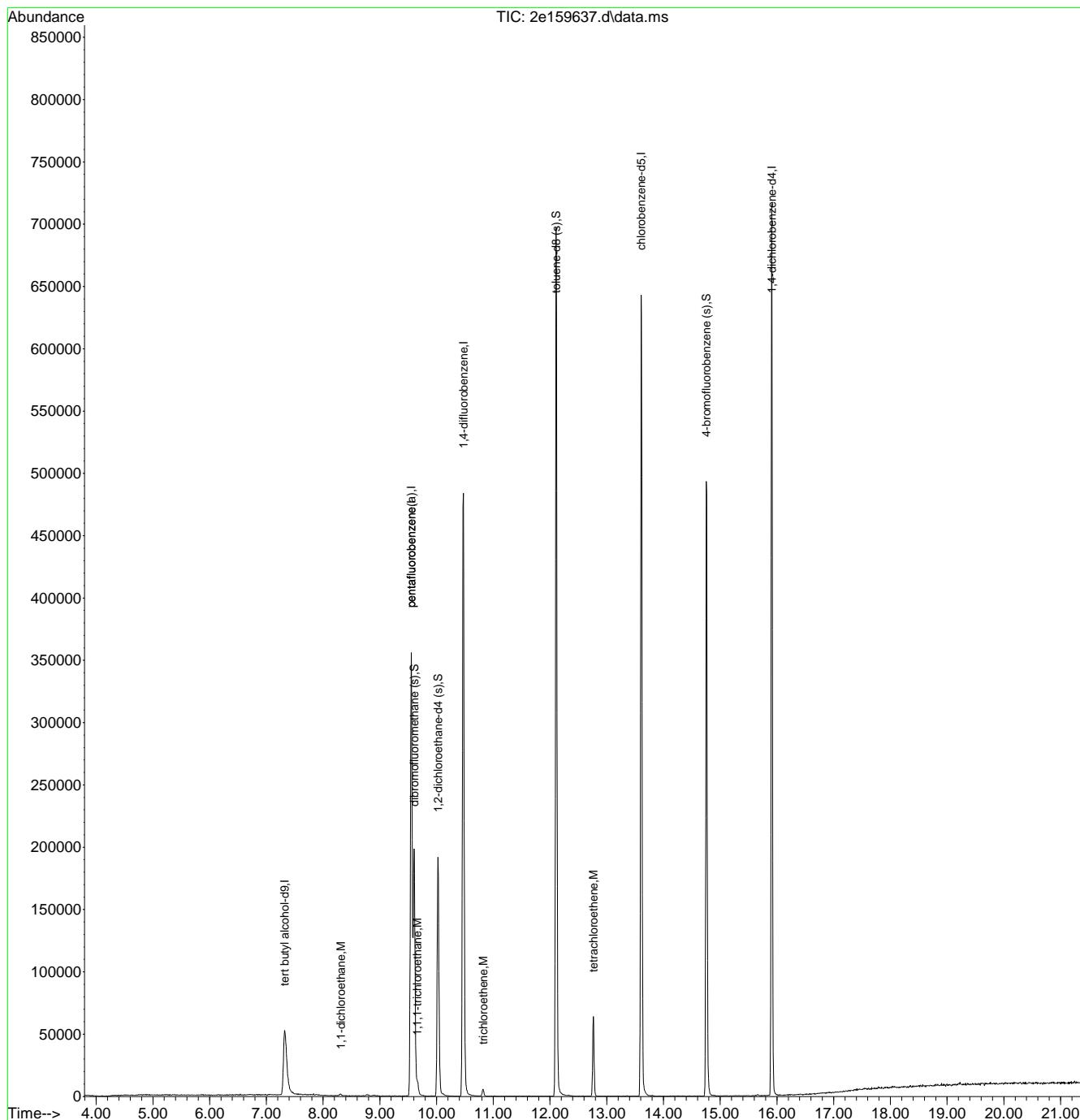
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	123439	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	292851	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	452119	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	366298	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	177206	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	292851	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	136332	52.61	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.22%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	150526	55.33	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.66%	
76) toluene-d8 (s)	12.108	98	479418	47.39	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.78%	
99) 4-bromofluorobenzene (s)	14.755	95	170818	49.43	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.86%	
<hr/>						
Target Compounds						
				Qvalue		
32) 1,1-dichloroethane	8.312	63	1965	0.35	ug/L	92
50) 1,1,1-trichloroethane	9.659	97	8170	1.76	ug/L	86
63) trichloroethene	10.823	95	2029	0.68	ug/L	97
81) tetrachloroethene	12.763	164	16141	6.82	ug/L	93

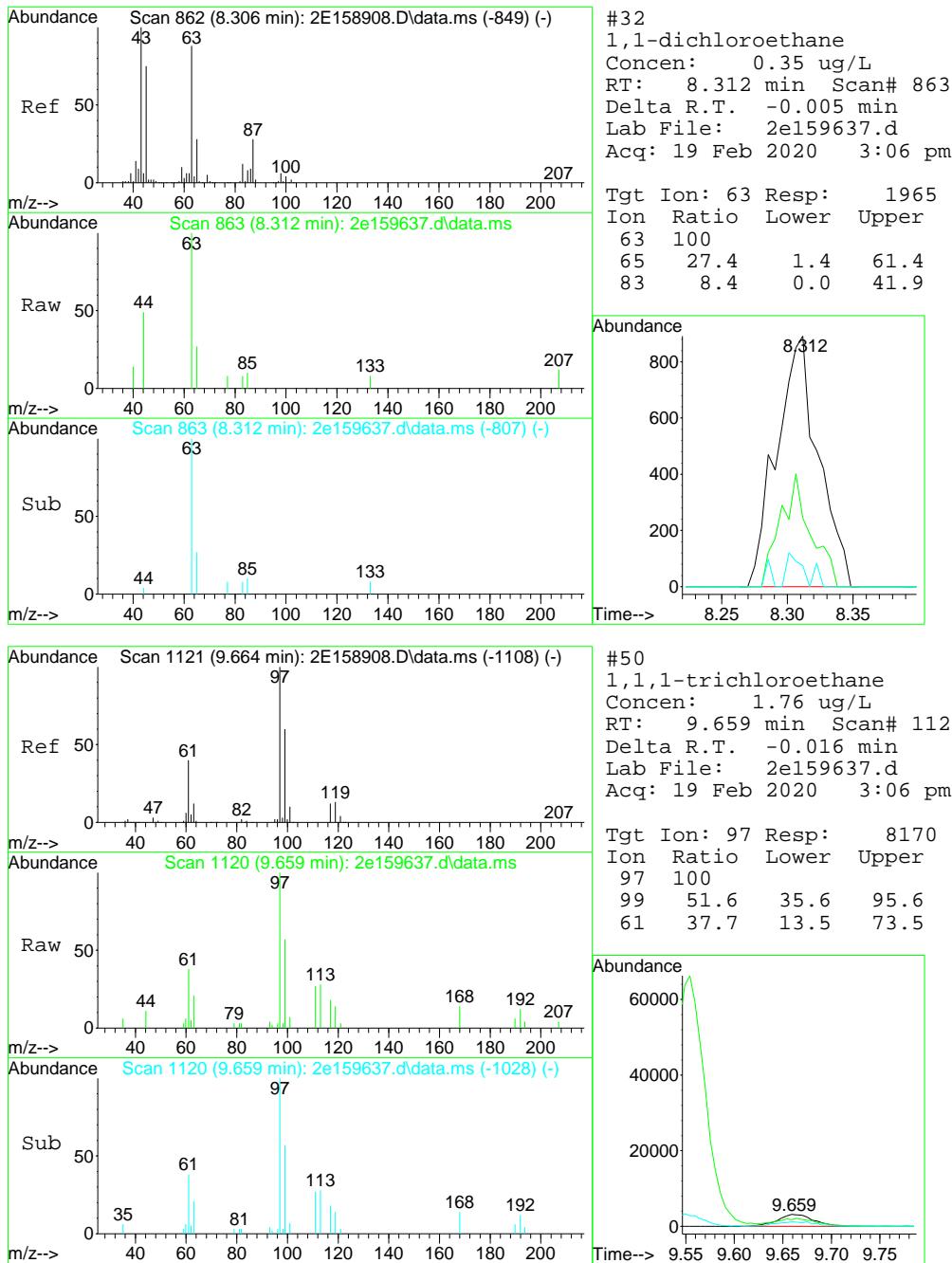
(#) = qualifier out of range (m) = manual integration (+) = signals summed

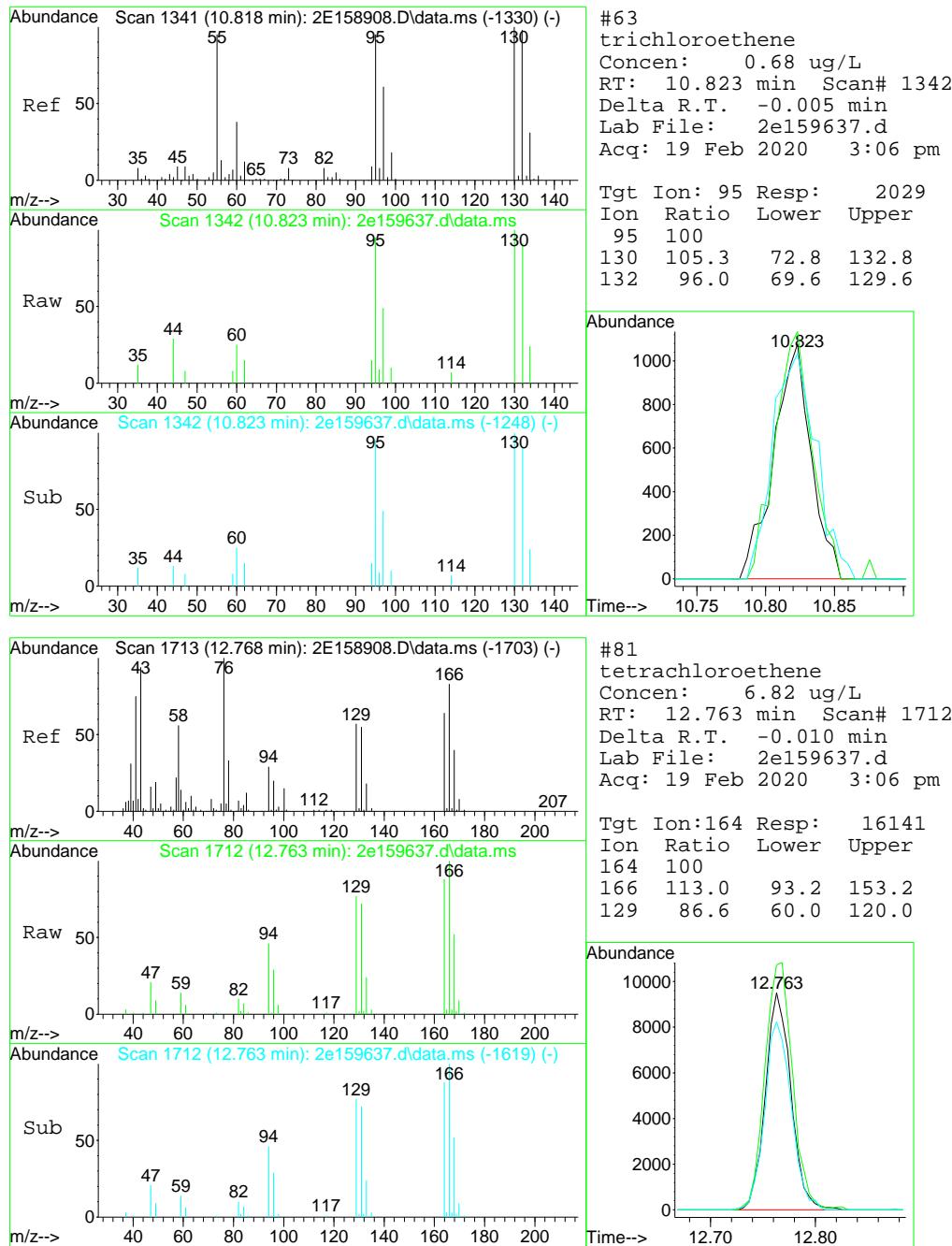
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159637.d
 Acq On : 19 Feb 2020 3:06 pm
 Operator : edwardd
 Sample : JD3298-14 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:48:47 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159638.d
 Acq On : 19 Feb 2020 3:37 pm
 Operator : edwardd
 Sample : JD3298-15 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:50:01 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

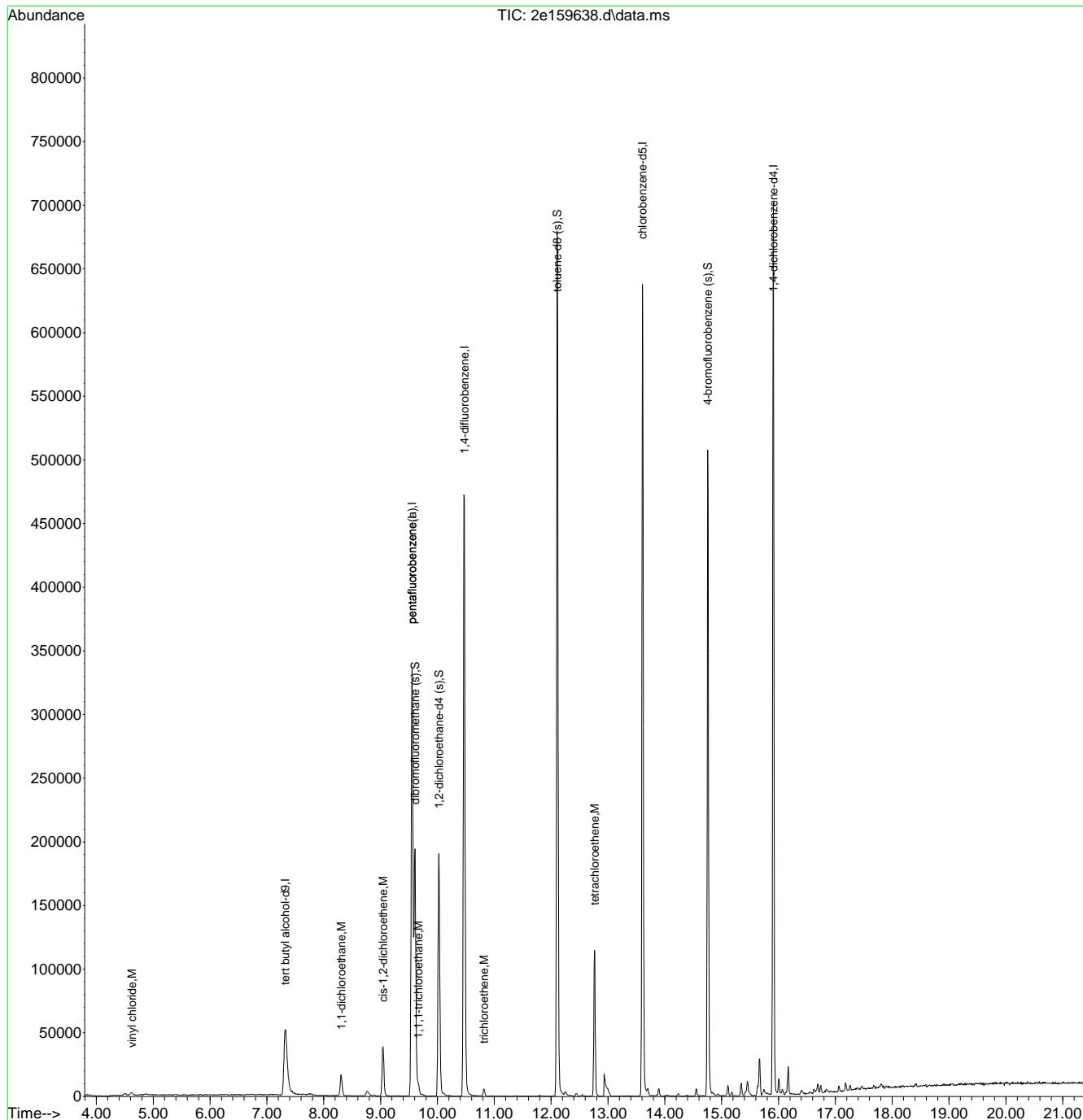
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	122725	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	280522	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	440454	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	359608	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	176931	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	280522	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	132675	53.45	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.90%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	147662	55.71	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	111.42%	
76) toluene-d8 (s)	12.108	98	467694	47.09	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.18%	
99) 4-bromofluorobenzene (s)	14.755	95	170120	49.31	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.62%	
<hr/>						
Target Compounds						
				Qvalue		
9) vinyl chloride	4.626	62	3538	0.73	ug/L	86
32) 1,1-dichloroethane	8.306	63	20342	3.79	ug/L	96
38) cis-1,2-dichloroethene	9.040	96	20897	6.38	ug/L	87
50) 1,1,1-trichloroethane	9.664	97	6864	1.54	ug/L	96
63) trichloroethene	10.818	95	2377	0.81	ug/L	97
81) tetrachloroethene	12.763	164	28782	12.39	ug/L	95

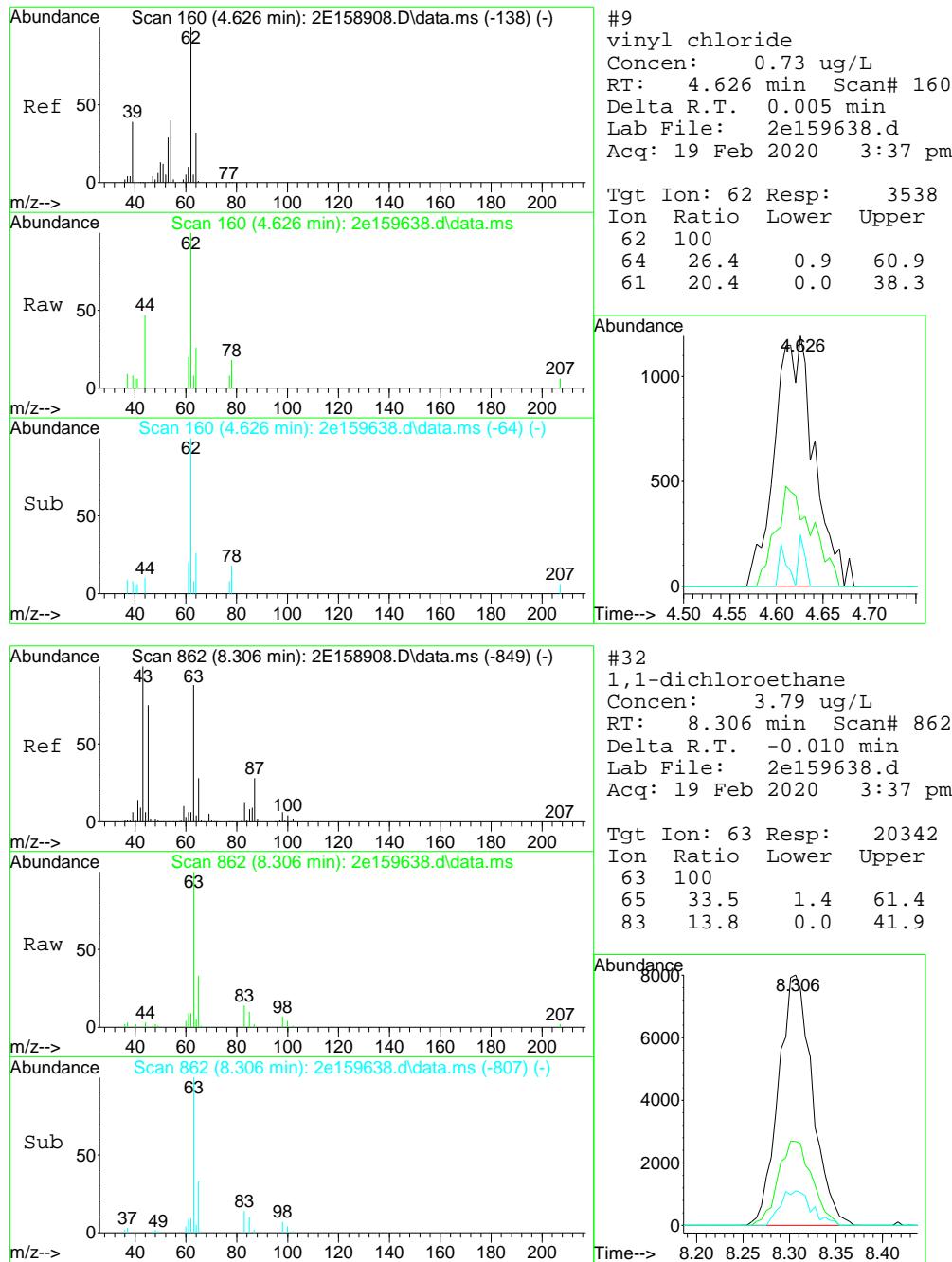
(#) = qualifier out of range (m) = manual integration (+) = signals summed

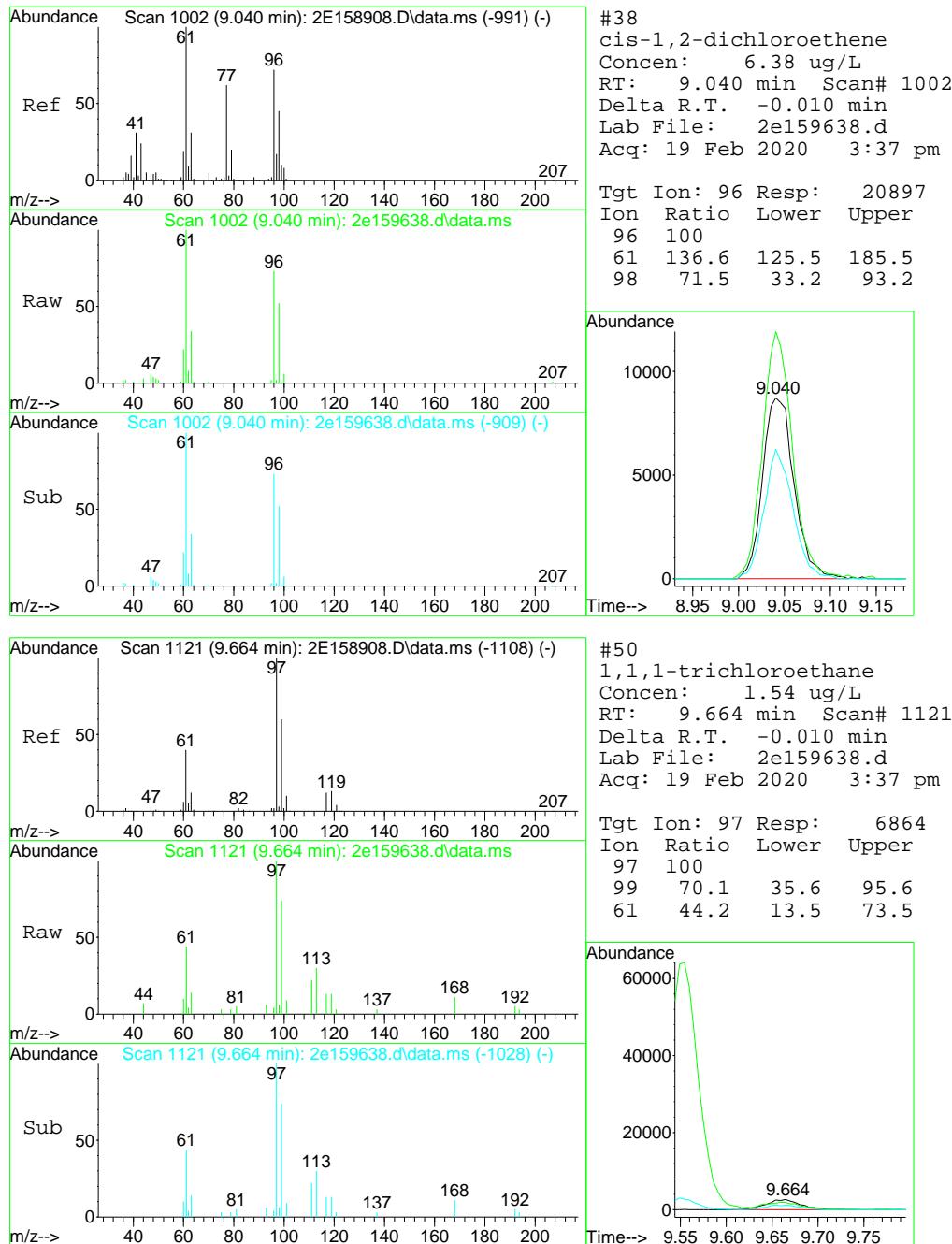
Quantitation Report (QT Reviewed)

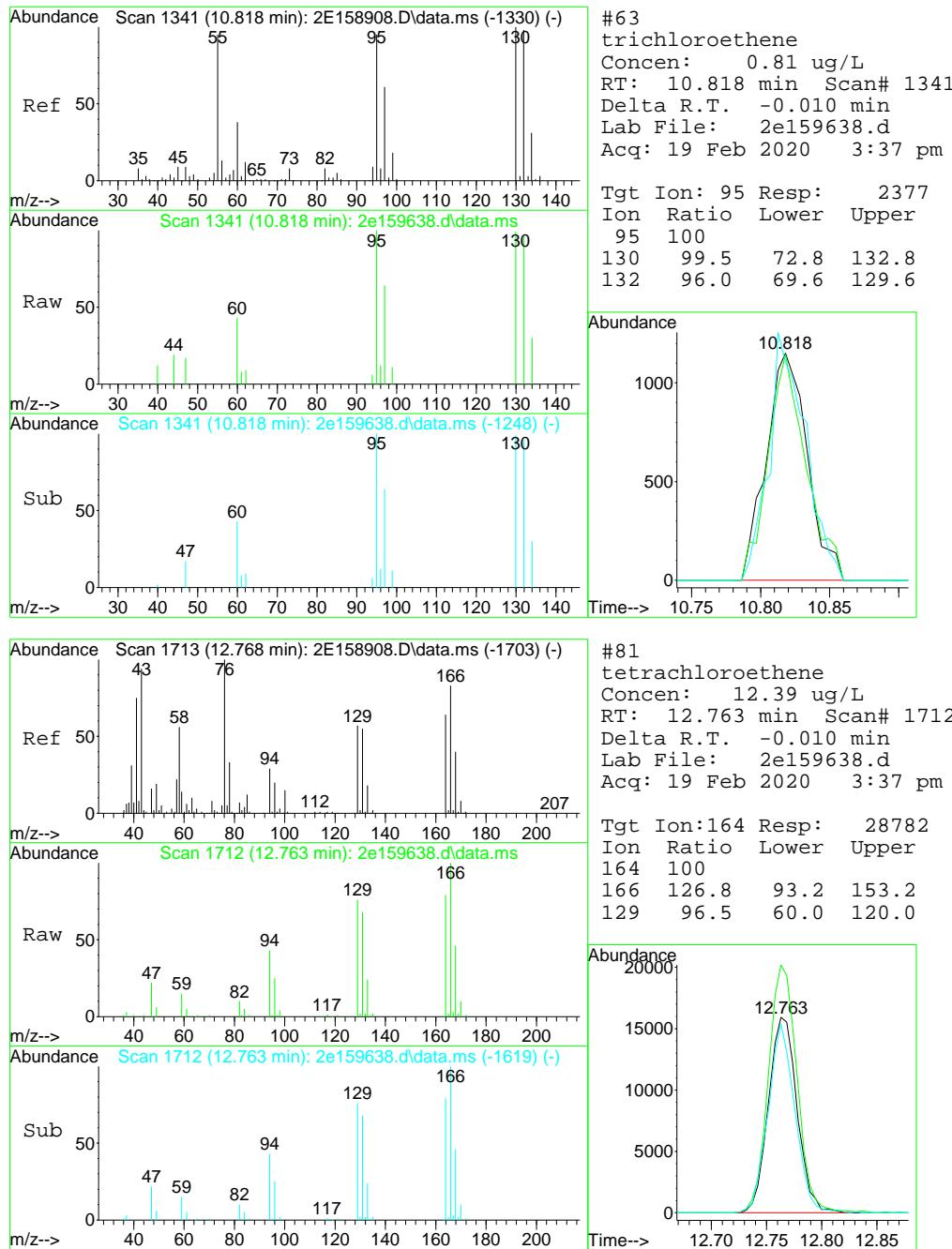
Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159638.d
 Acq On : 19 Feb 2020 3:37 pm
 Operator : edwardd
 Sample : JD3298-15 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:50:01 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159639.d
 Acq On : 19 Feb 2020 4:07 pm
 Operator : edwardd
 Sample : JD3298-16 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:50:58 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	132929	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	300496	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	466424	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	374825	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	181471	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	300496	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	140929	53.00	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.00%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	155021	55.23	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.46%	
76) toluene-d8 (s)	12.107	98	488558	47.19	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.38%	
99) 4-bromofluorobenzene (s)	14.755	95	178506	50.44	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.88%	

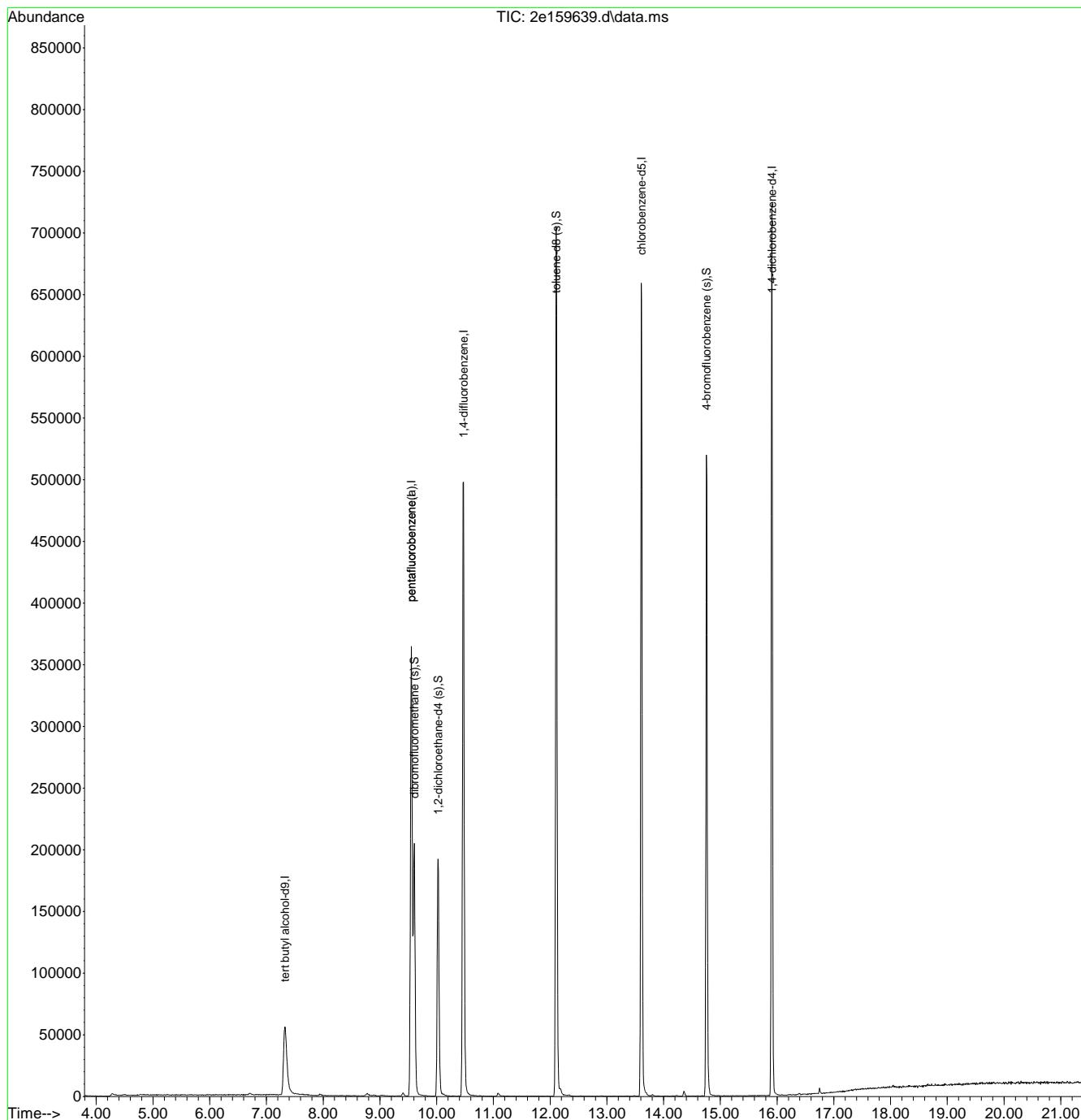
Target Compounds	Qvalue
<hr/>	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159639.d
 Acq On : 19 Feb 2020 4:07 pm
 Operator : edwarddd
 Sample : JD3298-16 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:50:58 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159627.d
 Acq On : 19 Feb 2020 10:01 am
 Operator : edwardd
 Sample : JD3298-17 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:36:50 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration

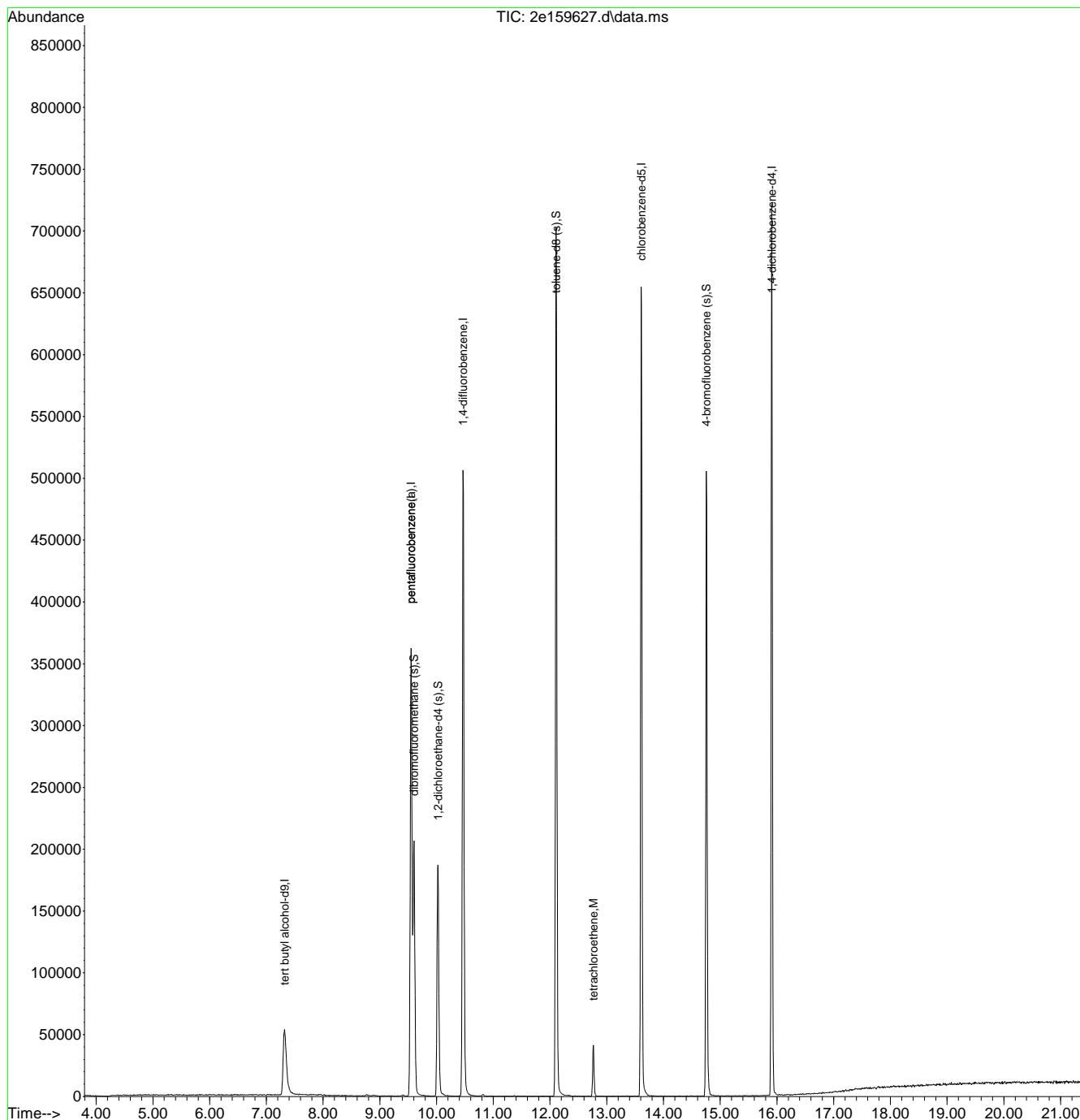
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	124538	500.00	ug/L	-0.02
5) pentafluorobenzene	9.549	168	300977	50.00	ug/L	-0.02
54) 1,4-difluorobenzene	10.467	114	462612	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.612	117	377652	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	182057	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.549	168	300977	50.00	ug/L	-0.02
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	138088	51.85	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.70%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151804	54.53	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.06%	
76) toluene-d8 (s)	12.108	98	484724	46.47	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.94%	
99) 4-bromofluorobenzene (s)	14.755	95	176470	49.71	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.42%	
<hr/>						
Target Compounds						
81) tetrachloroethene	12.763	164	10020	4.11	ug/L	95
<hr/>						

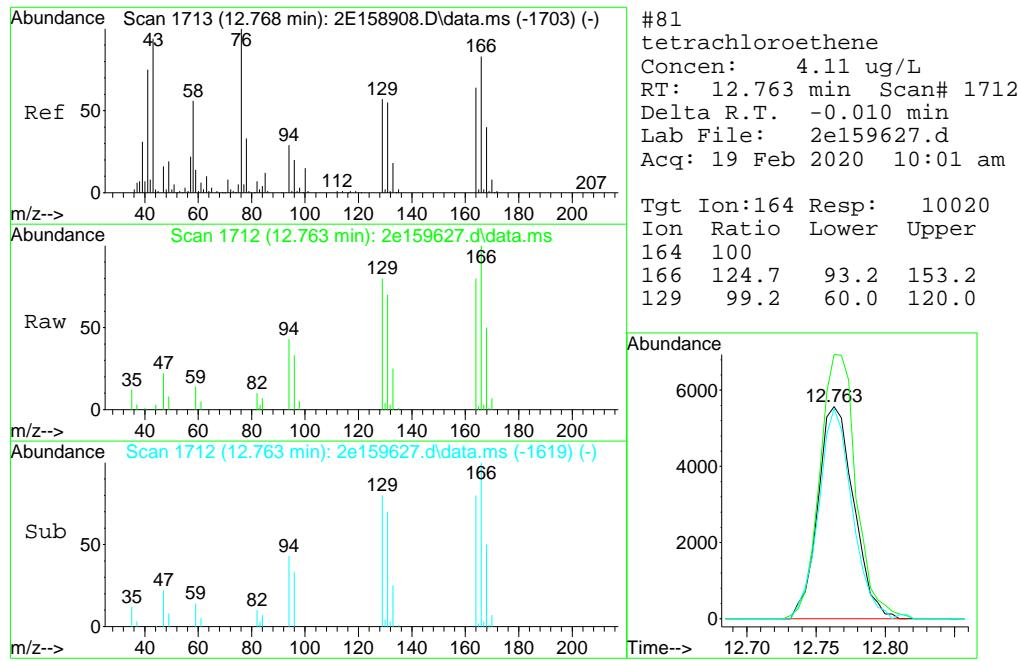
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159627.d
 Acq On : 19 Feb 2020 10:01 am
 Operator : edwardd
 Sample : JD3298-17 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:36:50 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Tue Jan 21 12:09:16 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159640.d
 Acq On : 19 Feb 2020 4:37 pm
 Operator : edwardd
 Sample : JD3298-18 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:51:44 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

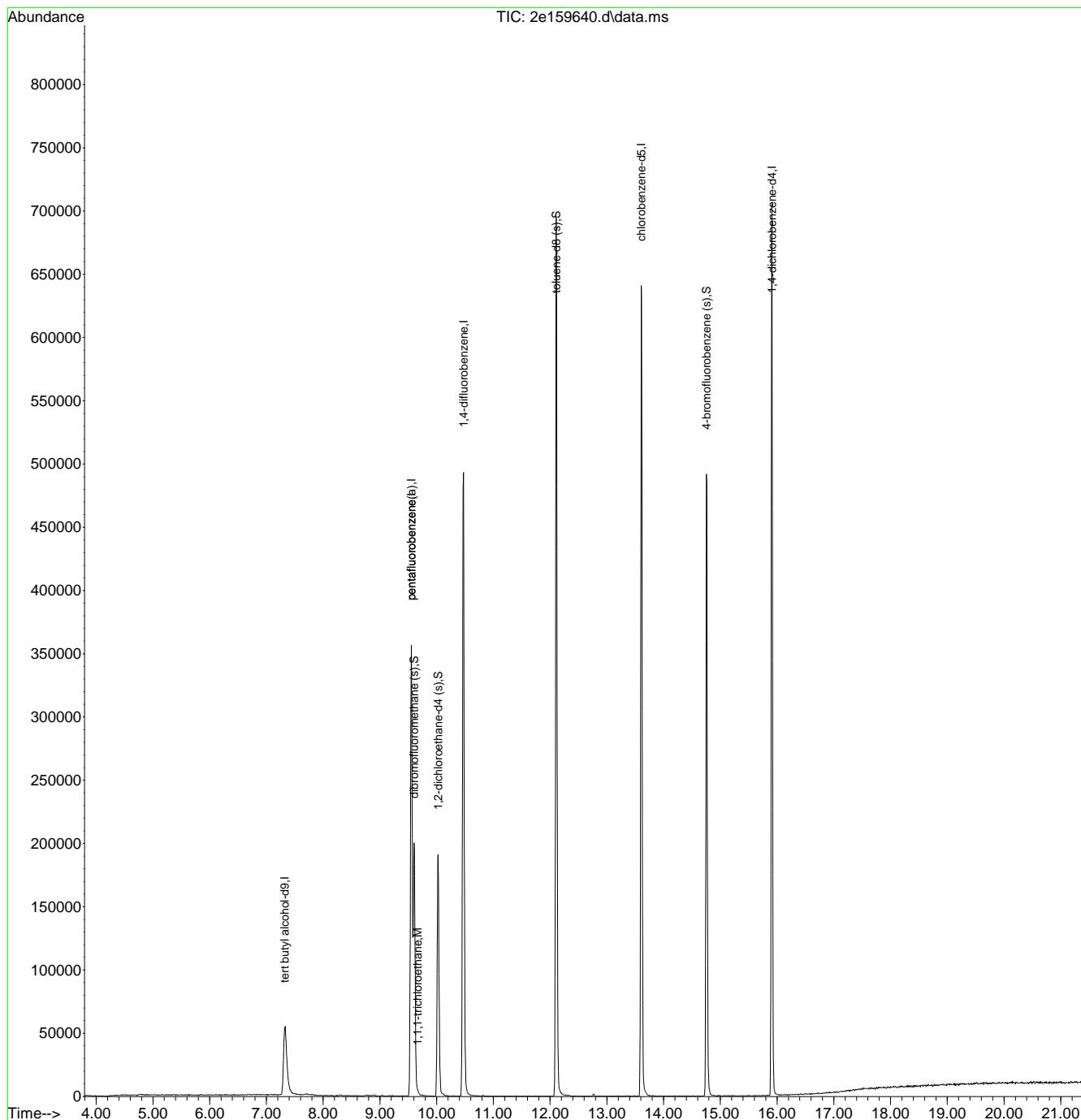
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	127887	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	294369	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	453298	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	368185	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	178324	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	294369	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	136807	52.52	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.04%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151374	55.49	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.98%	
76) toluene-d8 (s)	12.107	98	478718	47.07	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.14%	
99) 4-bromofluorobenzene (s)	14.755	95	170920	49.15	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.30%	
<hr/>						
Target Compounds						
50) 1,1,1-trichloroethane	9.664	97	2045	0.44	ug/L	88
<hr/>						

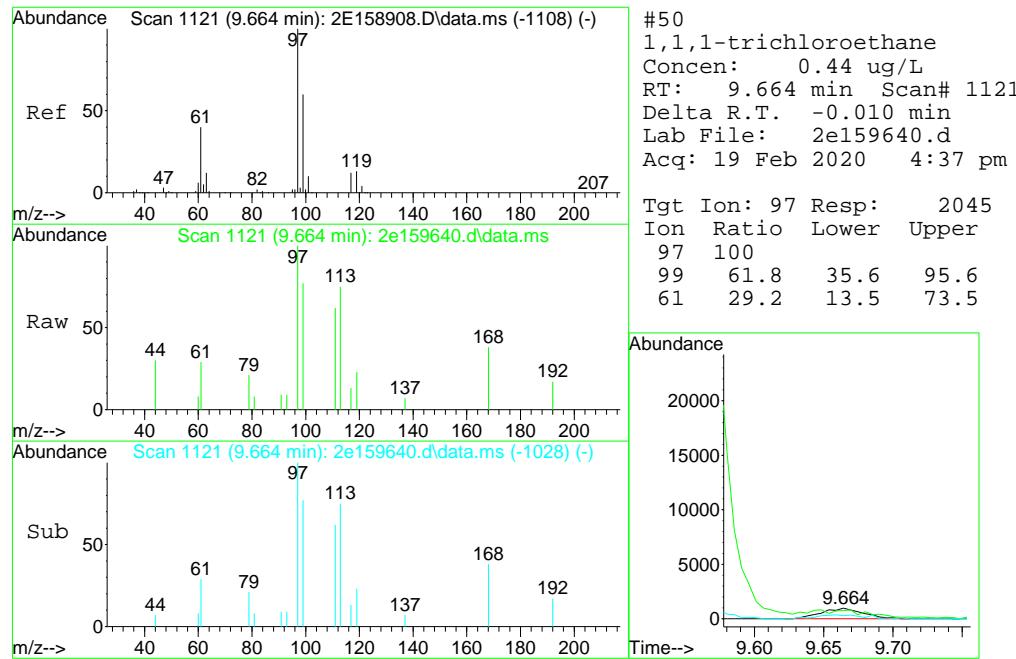
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159640.d
 Acq On : 19 Feb 2020 4:37 pm
 Operator : edwardd
 Sample : JD3298-18 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:51:44 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159641.d
 Acq On : 19 Feb 2020 5:08 pm
 Operator : edwardd
 Sample : JD3298-19 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:52:43 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

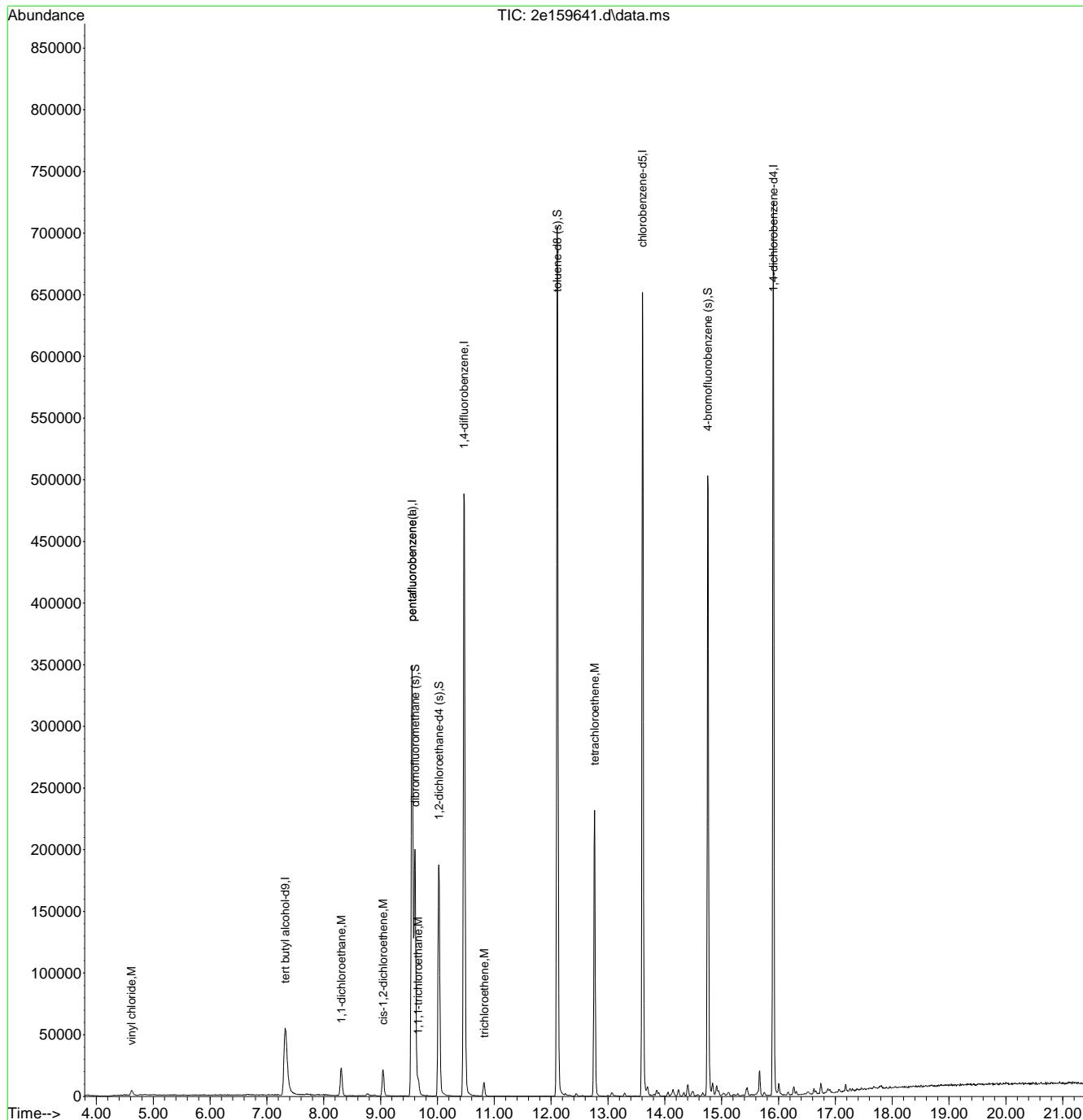
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	129597	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	289884	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.467	114	448821	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.607	117	370873	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	177069	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	289884	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	136768	53.31	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.62%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151204	55.98	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	111.96%	
76) toluene-d8 (s)	12.108	98	478063	46.67	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.34%	
99) 4-bromofluorobenzene (s)	14.755	95	176155	51.02	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.04%	
<hr/>						
Target Compounds						
				Qvalue		
9) vinyl chloride	4.615	62	6735	1.34	ug/L	97
32) 1,1-dichloroethane	8.306	63	28077	5.07	ug/L	93
38) cis-1,2-dichloroethene	9.040	96	11482	3.39	ug/L	85
50) 1,1,1-trichloroethane	9.659	97	9820	2.13	ug/L	88
63) trichloroethene	10.823	95	4507	1.51	ug/L	94
81) tetrachloroethene	12.763	164	55231	23.05	ug/L	98

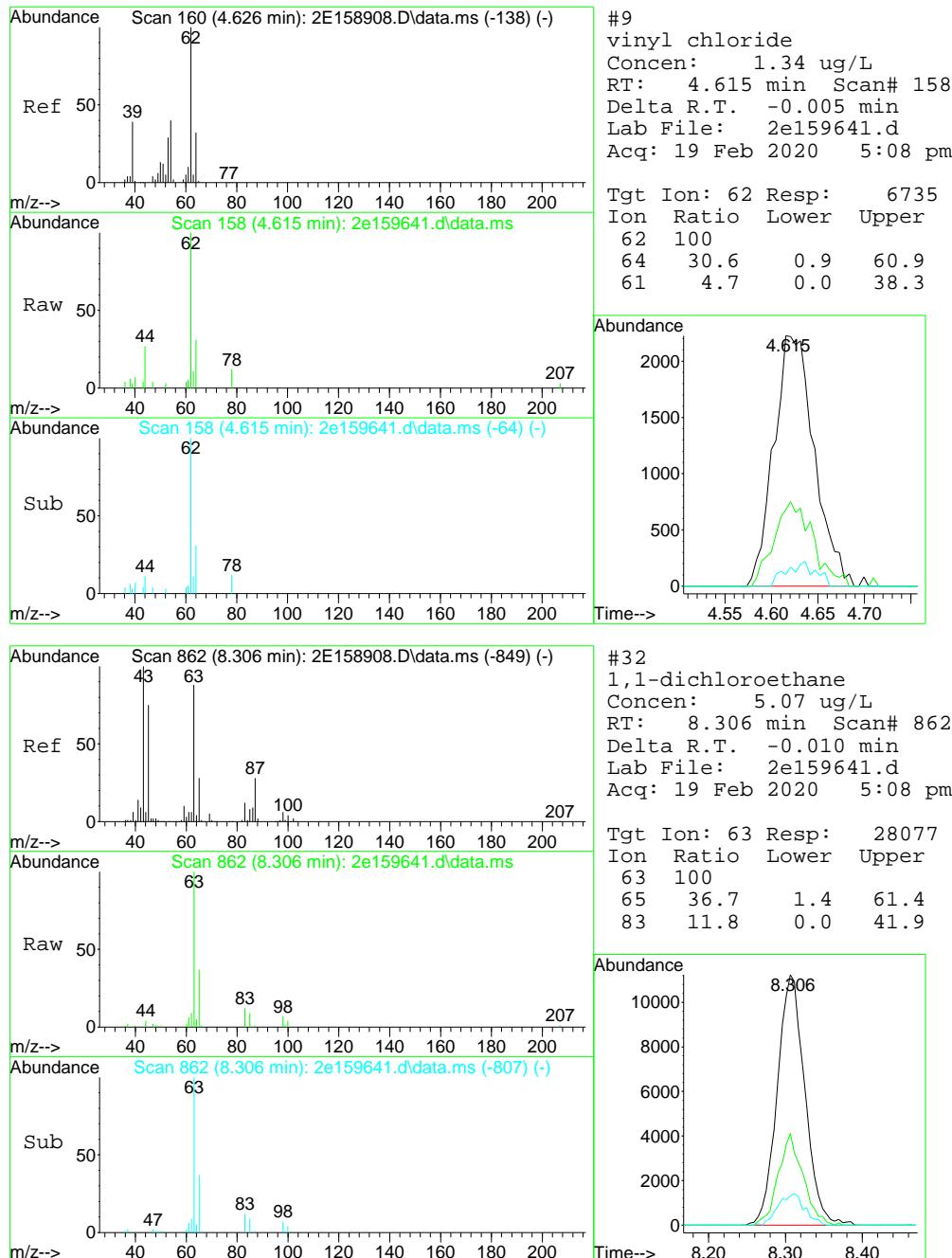
(#) = qualifier out of range (m) = manual integration (+) = signals summed

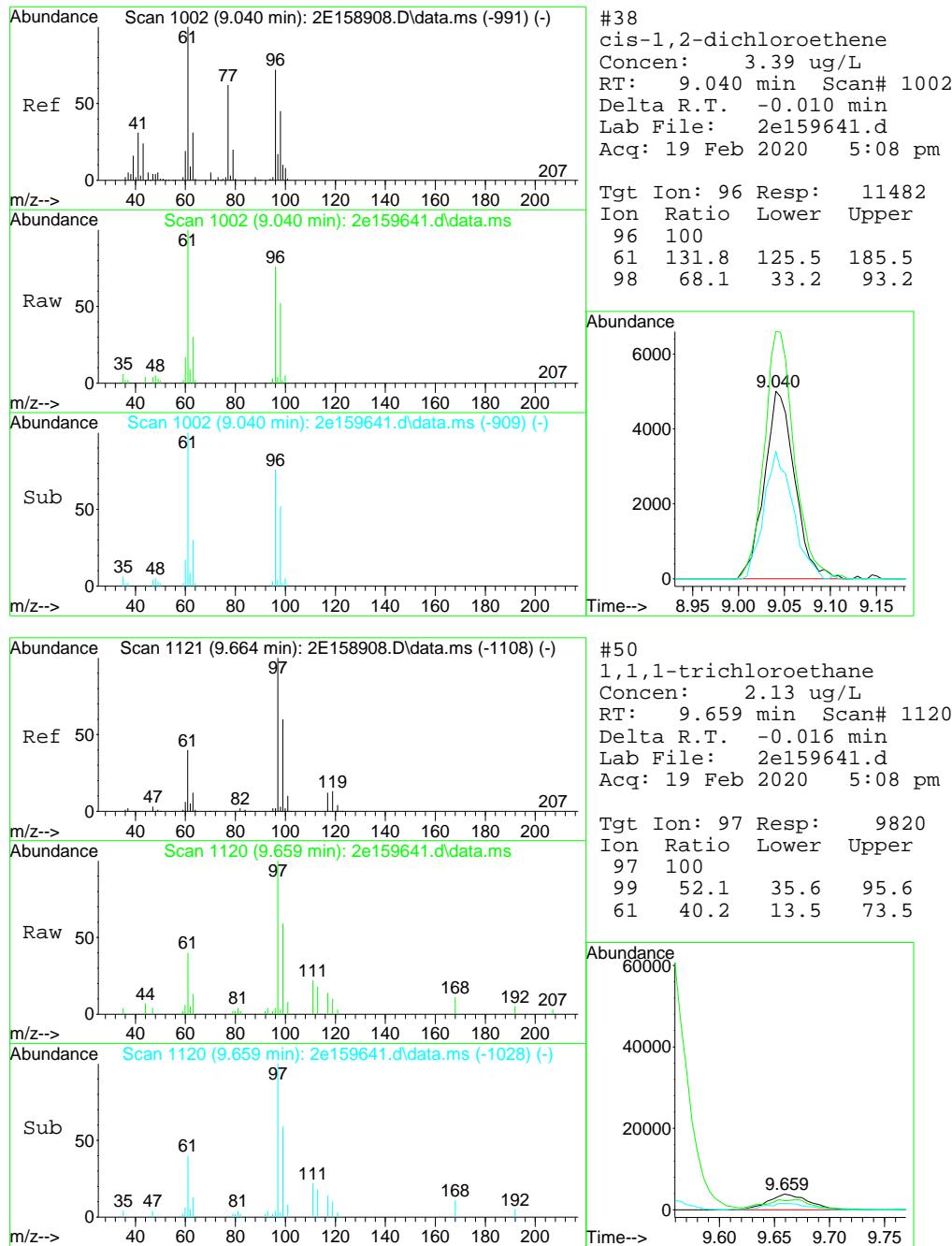
Quantitation Report (QT Reviewed)

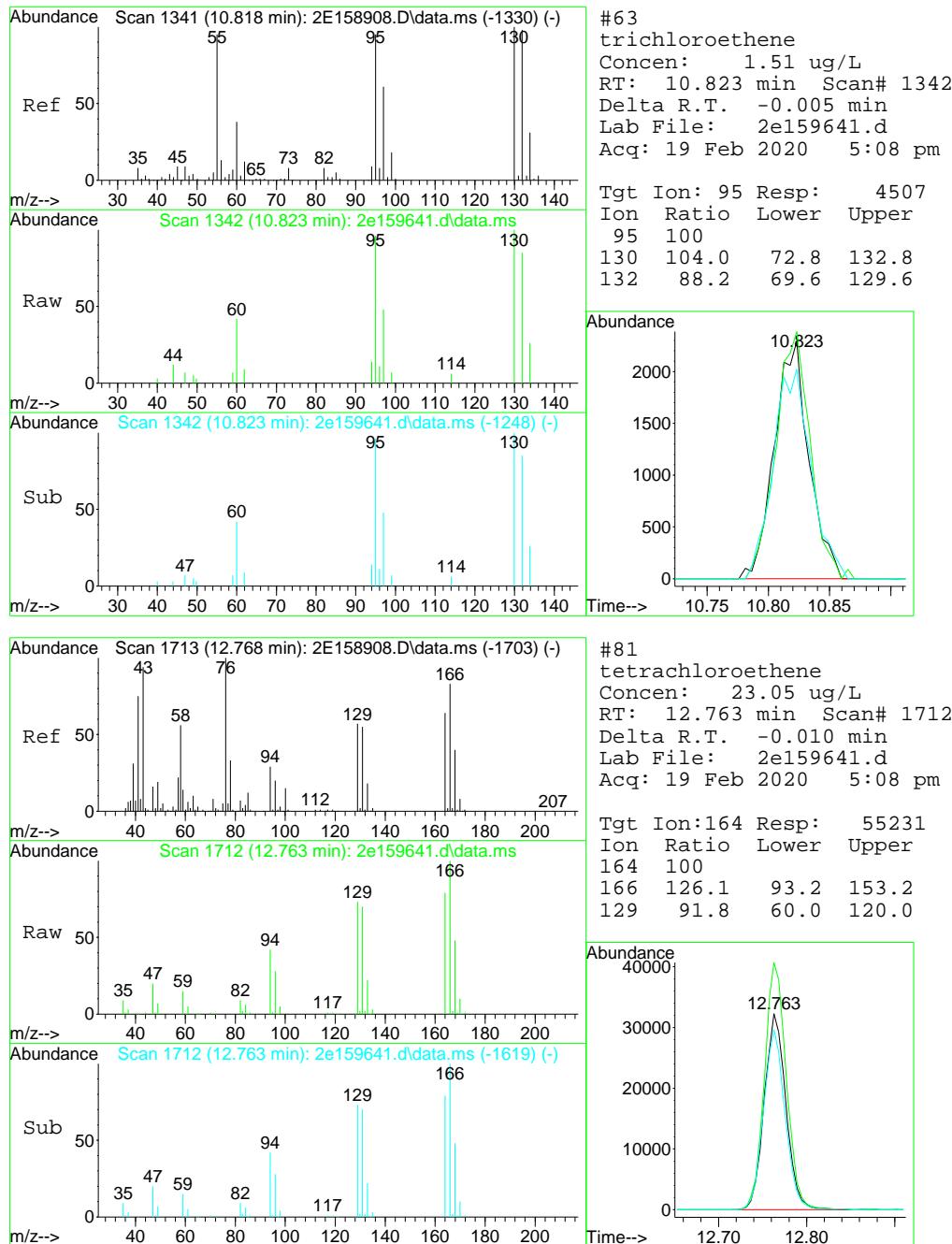
Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159641.d
 Acq On : 19 Feb 2020 5:08 pm
 Operator : edwardd
 Sample : JD3298-19 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,.1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:52:43 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159633.d
 Acq On : 19 Feb 2020 1:04 pm
 Operator : edwardd
 Sample : JD3298-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:43:18 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	124492	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	295085	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.466	114	456952	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.612	117	372628	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	180146	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	295085	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	135041	51.71	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.42%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	148894	54.15	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.30%	
76) toluene-d8 (s)	12.107	98	480963	46.73	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.46%	
99) 4-bromofluorobenzene (s)	14.755	95	175238	49.88	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.76%	

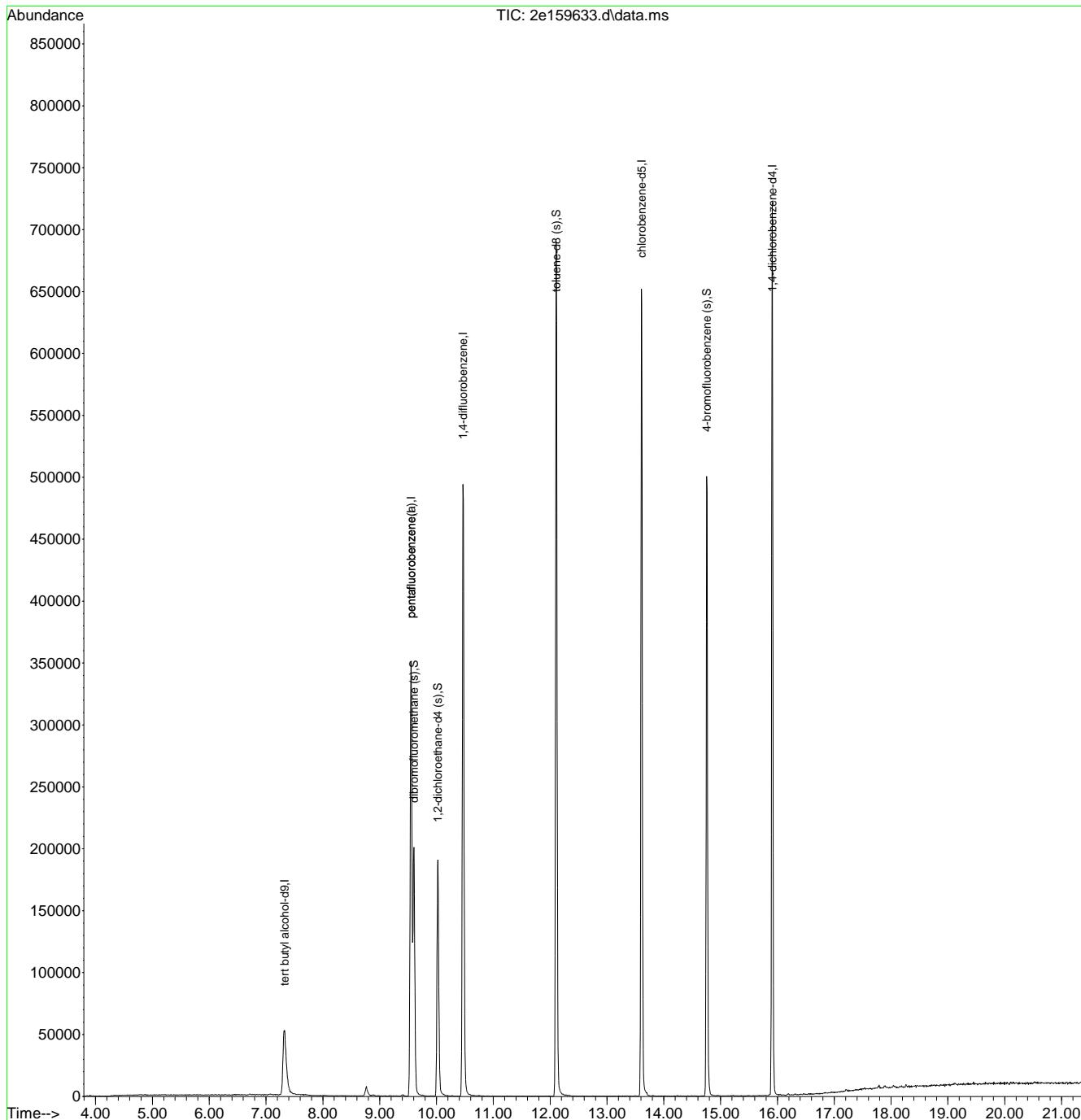
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159633.d
 Acq On : 19 Feb 2020 1:04 pm
 Operator : edwarddd
 Sample : JD3298-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:43:18 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159600.d
 Acq On : 18 Feb 2020 9:00 am
 Operator : edwardd
 Sample : mb Inst : VOAMS2E
 Misc : MS41110,V2E8003,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:42:51 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

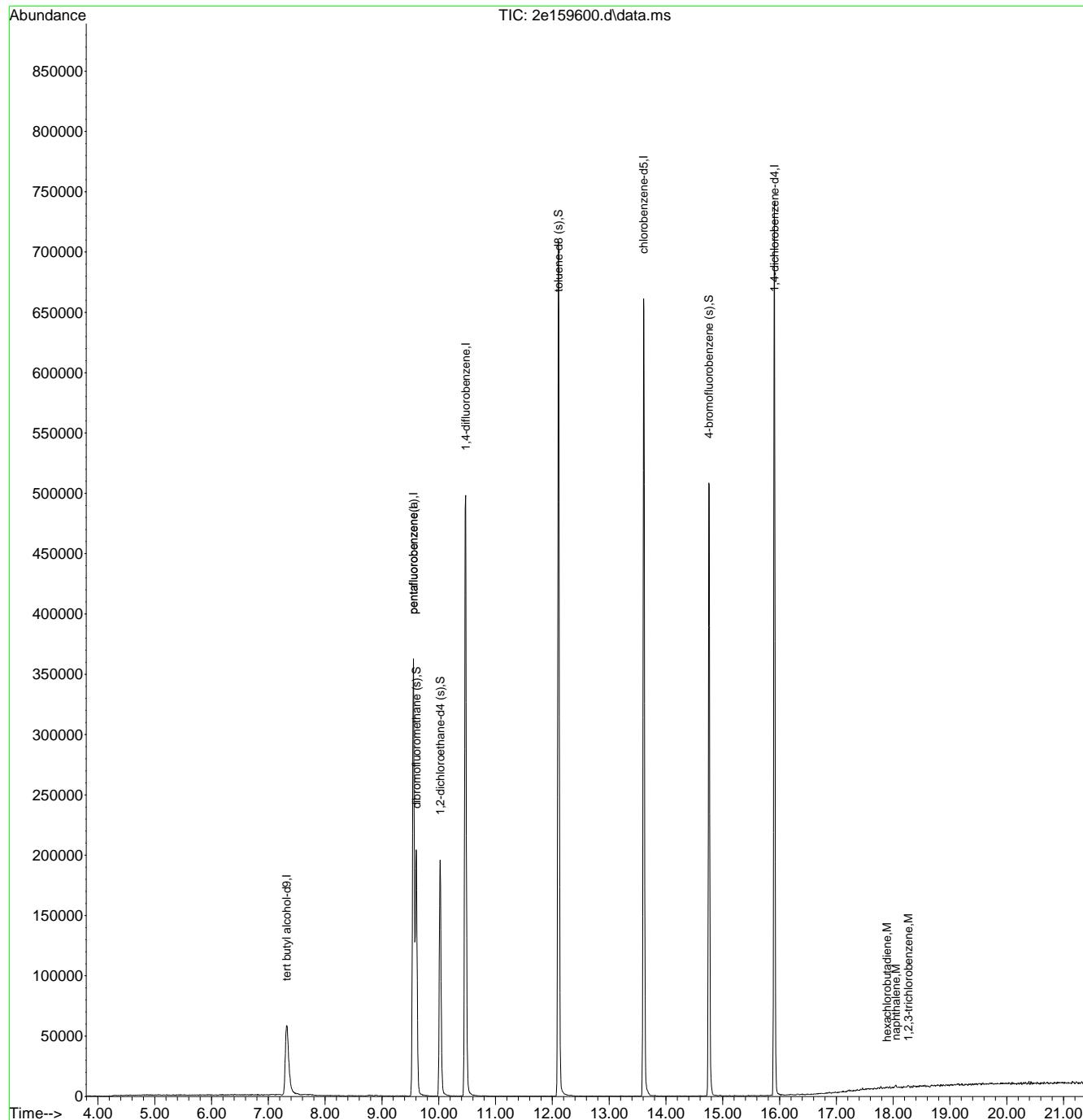
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	141842	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	297487	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	465764	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	380762	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	184095	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	297487	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	139772	53.09	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.18%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	152118	54.27	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.54%	
76) toluene-d8 (s)	12.107	98	492206	46.80	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.60%	
99) 4-bromofluorobenzene (s)	14.755	95	177504	49.44	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.88%	
<hr/>						
Target Compounds						
120) hexachlorobutadiene	17.891	225	415	0.19	ug/L	# 69
121) naphthalene	18.048	128	1464	0.15	ug/L	74
122) 1,2,3-trichlorobenzene	18.268	180	625	0.15	ug/L	# 75
<hr/>						

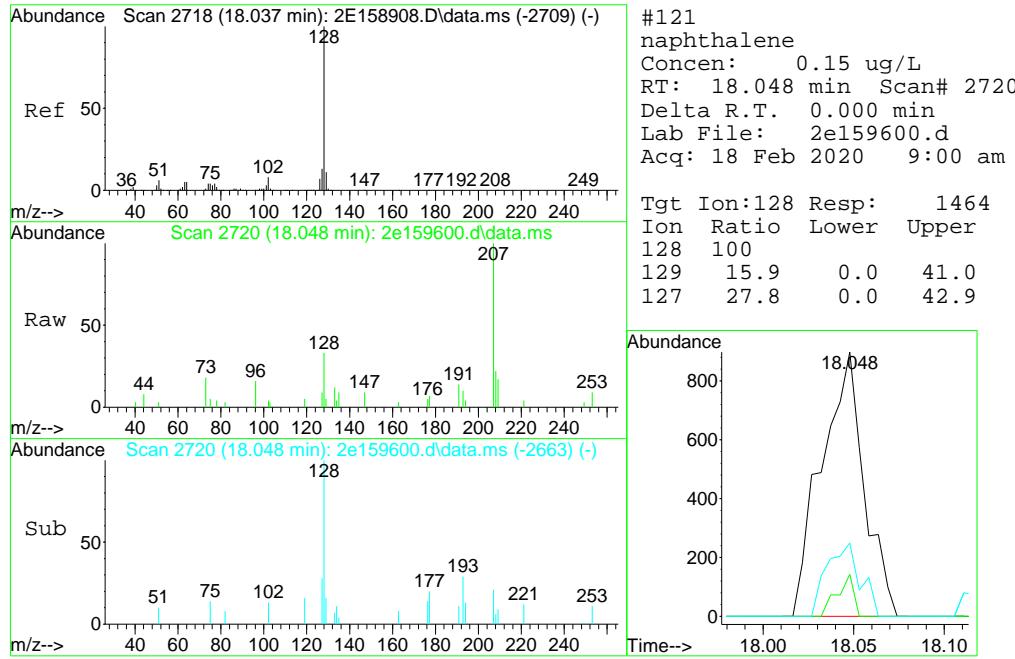
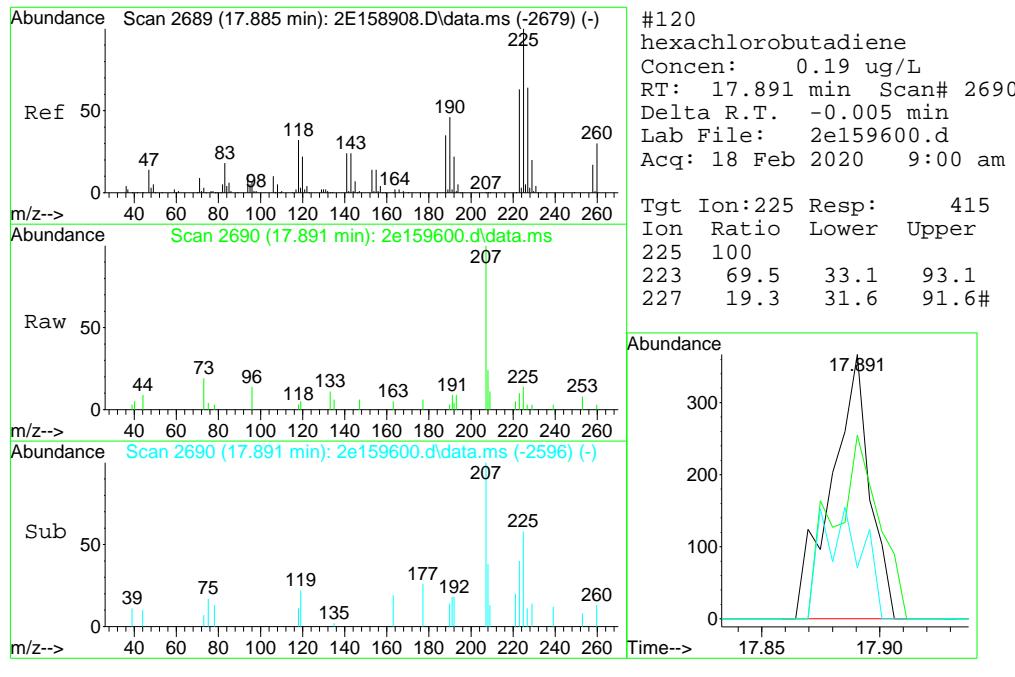
(#) = qualifier out of range (m) = manual integration (+) = signals summed

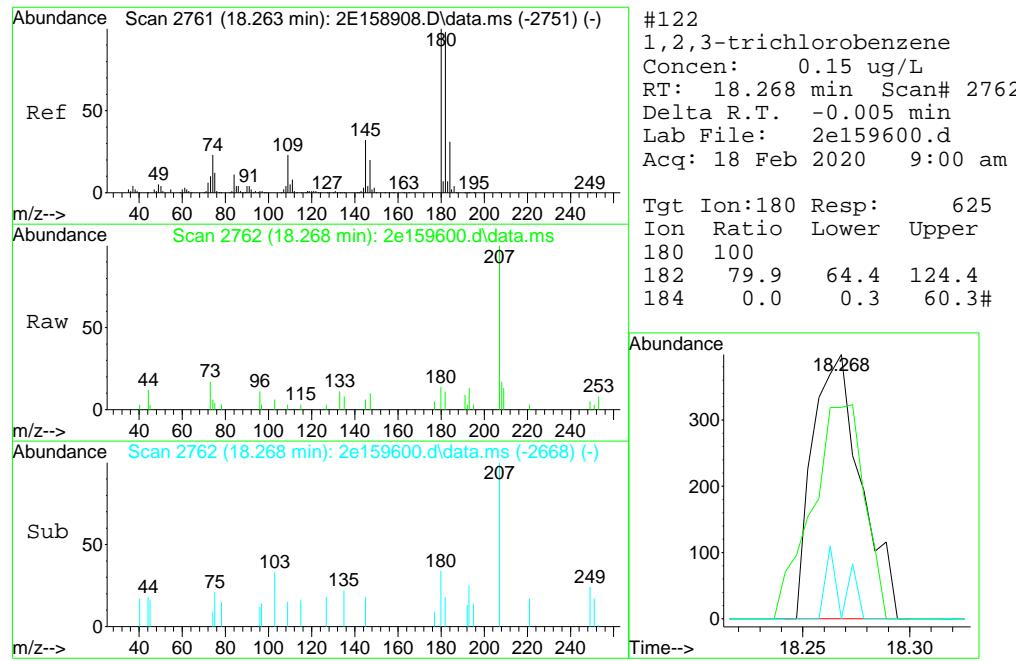
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159600.d
 Acq On : 18 Feb 2020 9:00 am
 Operator : edwardd
 Sample : mb
 Misc : MS41110,V2E8003,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:42:51 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration







7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159625.d
 Acq On : 19 Feb 2020 8:55 am
 Operator : edwardd
 Sample : mb Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:32:40 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

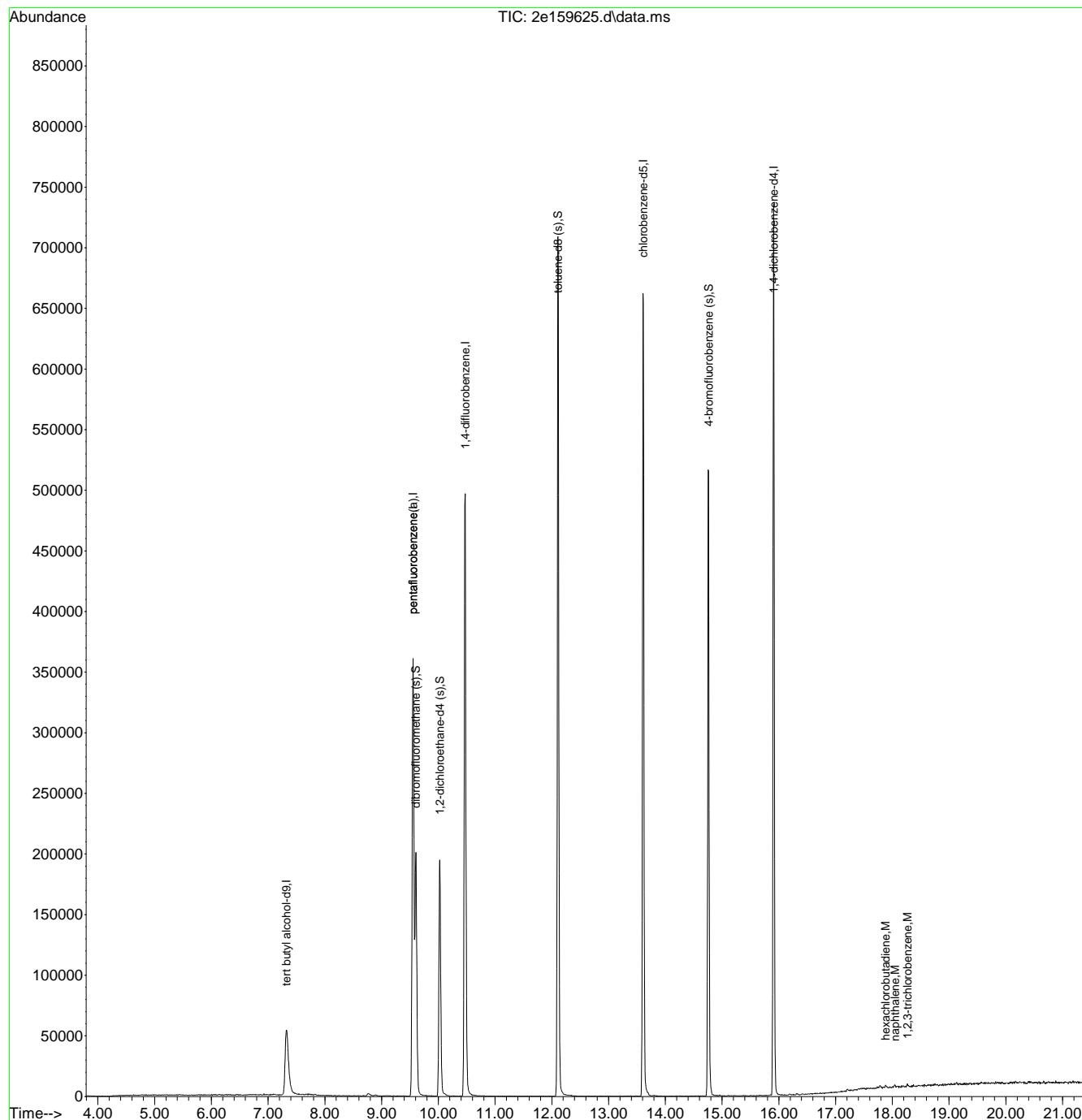
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	132391	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	301888	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	469013	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	383372	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	184326	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	301888	50.00	ug/L	-0.01
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	138409	51.81	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.62%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	151661	53.74	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	107.48%	
76) toluene-d8 (s)	12.107	98	497320	46.97	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.94%	
99) 4-bromofluorobenzene (s)	14.760	95	181658	50.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.08%	
<hr/>						
Target Compounds						
120) hexachlorobutadiene	17.880	225	419	0.20	ug/L	91
121) naphthalene	18.048	128	1767	0.18	ug/L	94
122) 1,2,3-trichlorobenzene	18.263	180	664	0.16	ug/L	89
<hr/>						

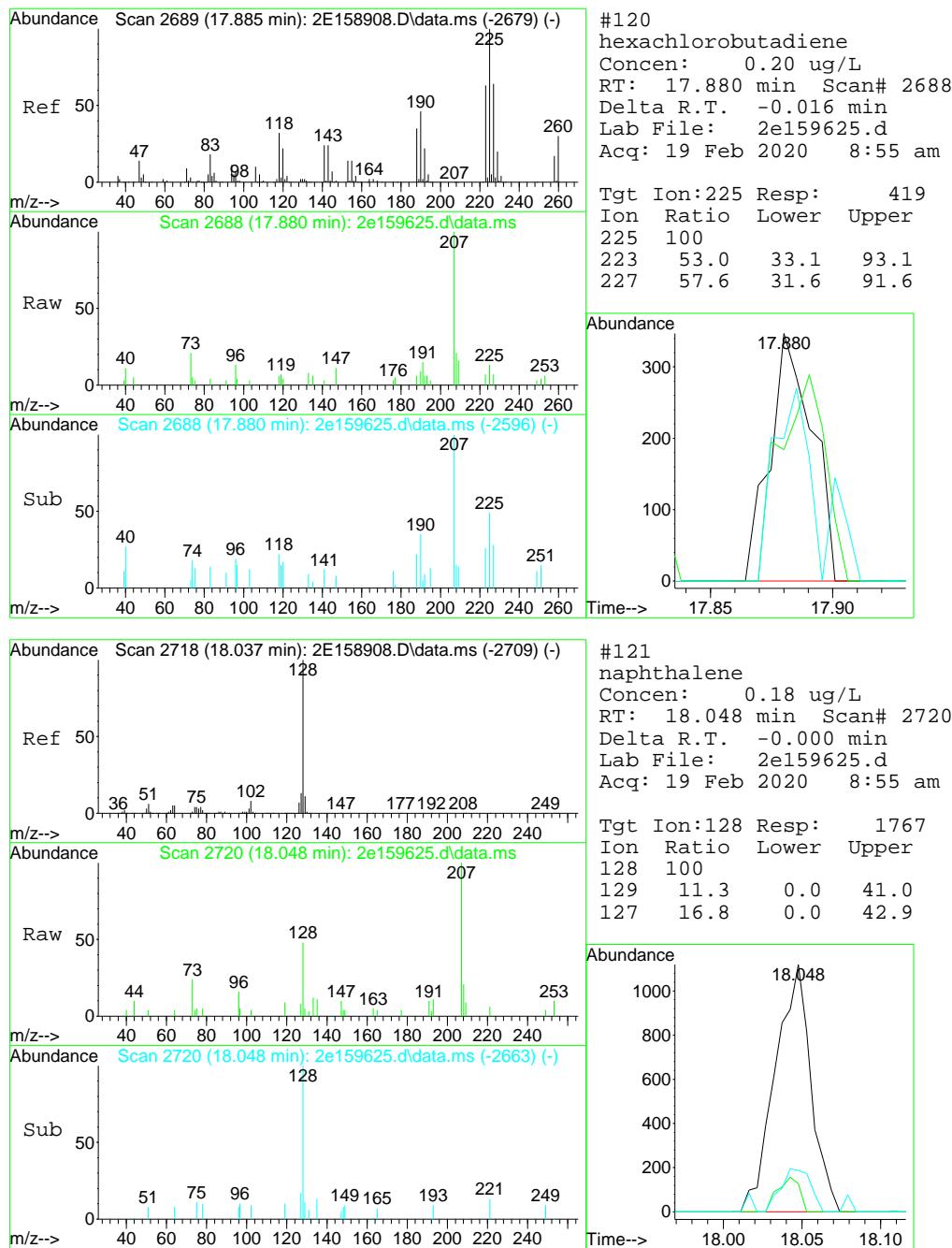
(#) = qualifier out of range (m) = manual integration (+) = signals summed

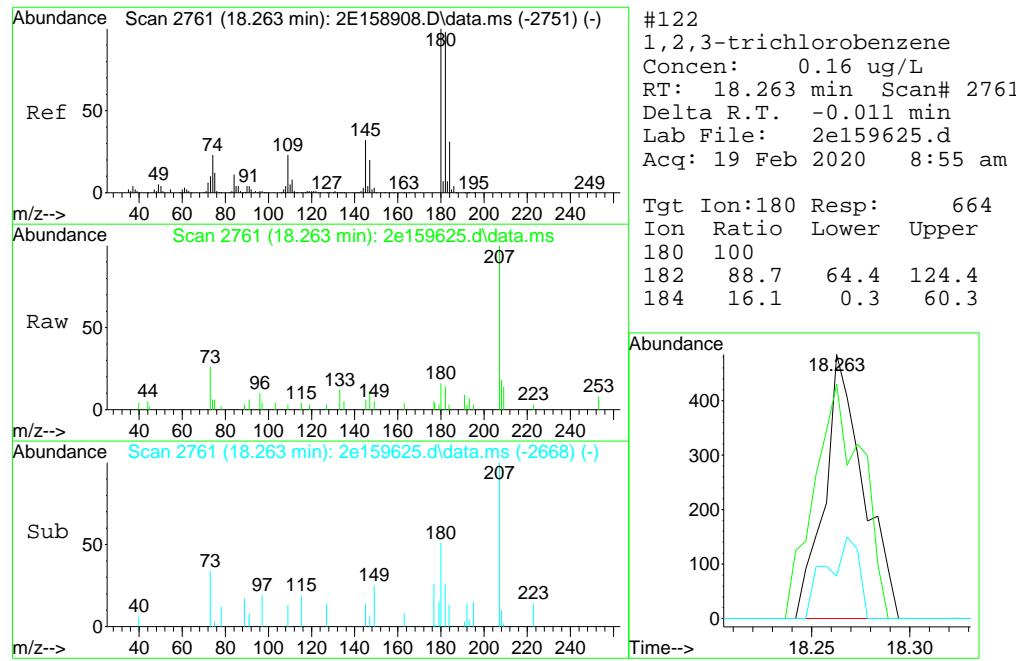
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159625.d
 Acq On : 19 Feb 2020 8:55 am
 Operator : edwardd
 Sample : mb Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:32:40 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration







7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159598.d
 Acq On : 18 Feb 2020 7:59 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:41:19 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	129674	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	306439	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	478328	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	397859	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	201492	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	306439	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	140658	51.87	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.74%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	152613	53.02	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	106.04%	
76) toluene-d8 (s)	12.107	98	515696	46.93	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.86%	
99) 4-bromofluorobenzene (s)	14.755	95	191907	48.84	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.68%	
Target Compounds						
					Qvalue	
2) ethanol	6.073	45	153497	4350.84	ug/L	97
3) tertiary butyl alcohol	7.441	59	94445	273.11	ug/L	96
4) 1,4-dioxane	11.190	88	39122	1360.74	ug/L	93
6) chlorodifluoromethane	4.012	51	164334	31.85	ug/L	92
7) dichlorodifluoromethane	3.991	85	216954	55.64	ug/L	99
8) chloromethane	4.390	50	202864	37.69	ug/L	99
9) vinyl chloride	4.620	62	218863	41.27	ug/L	99
10) bromomethane	5.250	94	146939	46.82	ug/L	99
11) chloroethane	5.396	64	121429	44.27	ug/L	99
12) trichlorofluoromethane	5.858	101	251407	56.65	ug/L	94
13) 1,3-butadiene	4.652	54	121350	33.81	ug/L	96
14) vinyl bromide	5.748	106	130573	50.93	ug/L	98
15) ethyl ether	6.235	74	87013	45.36	ug/L	94
16) 2-chloropropane	6.429	43	238632	39.58	ug/L	92
17) acrolein	6.492	56	28247	46.32	ug/L	95
18) freon 113	6.634	151	119441	51.93	ug/L	93
19) 1,1-dichloroethene	6.660	61	210967	44.74	ug/L	98
20) acetone	6.697	43	160386	181.00	ug/L	94
21) acetonitrile	7.132	41	184934	444.52	ug/L	99
22) iodomethane	6.938	142	182714	47.88	ug/L	95
23) carbon disulfide	7.069	76	357095	42.28	ug/L	99
24) methylene chloride	7.368	84	160372	47.56	ug/L	93
25) methyl acetate	7.163	43	110111	48.81	ug/L	97
26) methyl tert butyl ether	7.693	73	425952	46.52	ug/L	97
27) trans-1,2-dichloroethene	7.740	61	209652	47.77	ug/L	95
28) hexane	8.039	56	113711	47.22	ug/L	92
29) di-isopropyl ether	8.285	45	554443	46.91	ug/L	93
30) ethyl tert-butyl ether	8.752	59	512099	49.83	ug/L	97
31) 2-butanone	9.004	72	68793	219.80	ug/L	90
32) 1,1-dichloroethane	8.306	63	283301	48.35	ug/L	97
33) chloroprene	8.411	53	237451	49.60	ug/L	99
34) acrylonitrile	7.682	53	56256	49.03	ug/L	94
35) vinyl acetate	8.291	86	35430	54.35	ug/L #	85
36) ethyl acetate	9.025	45	22435	44.09	ug/L #	65
37) 2,2-dichloropropane	9.040	77	237908	46.88	ug/L	99
38) cis-1,2-dichloroethene	9.040	96	177768	49.66	ug/L	91
39) propionitrile	9.098	54	191542	465.08	ug/L	94
40) methyl acrylate	9.103	85	22602	54.53	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159598.d
 Acq On : 18 Feb 2020 7:59 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:41:19 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.355	128	84403	51.76	ug/L #	85
42) tetrahydrofuran	9.392	72	18715	46.01	ug/L #	83
43) chloroform	9.402	83	286639	52.42	ug/L	98
44) t-butyl formate	9.439	59	123069	38.80	ug/L	95
45) 1,1-dichloropropene	9.837	75	211640	48.29	ug/L	97
46) carbon tetrachloride	9.863	117	215594	51.94	ug/L	96
47) isopropyl acetate	10.021	87	37316	52.17	ug/L #	80
49) methacrylonitrile	9.287	67	60680	52.80	ug/L	93
50) 1,1,1-trichloroethane	9.659	97	253050	52.00	ug/L	96
51) cyclohexane	9.732	84	236937	47.64	ug/L	97
52) iso-butyl alcohol	9.842	43	61735	474.93	ug/L	96
53) tert amyl alcohol	9.968	73	42537	249.19	ug/L	94
56) 2,2,4-trimethylpentane	10.099	57	508061	49.66	ug/L	100
57) n-butyl alcohol	10.592	56	235290	2839.78	ug/L	98
58) benzene	10.099	78	645745	47.20	ug/L	100
59) tert-amyl methyl ether	10.131	73	509954	48.29	ug/L	96
60) heptane	10.267	57	112075	47.93	ug/L	97
61) 1,2-dichloroethane	10.115	62	207079	51.32	ug/L	100
62) ethyl acrylate	10.812	55	186512	51.85	ug/L	99
63) trichloroethene	10.812	95	162101	51.00	ug/L	94
64) 2-nitropropane	11.583	41	52507	53.37	ug/L #	49
65) 2-chloroethyl vinyl ether	11.599	63	471504	248.17	ug/L	97
66) methyl methacrylate	11.080	100	41372	53.57	ug/L #	88
67) 1,2-dichloropropane	11.080	63	164637	47.51	ug/L	94
68) methylcyclohexane	11.033	83	272949	48.17	ug/L	99
69) dibromomethane	11.237	93	95680	52.69	ug/L	96
70) bromodichloromethane	11.363	83	223368	55.15	ug/L	99
71) epichlorohydrin	11.725	57	74705	259.35	ug/L	94
72) cis-1,3-dichloropropene	11.819	75	268931	50.80	ug/L	98
73) 4-methyl-2-pentanone	11.908	58	233964	210.33	ug/L	93
74) 3-methyl-1-butanol	11.929	70	96849	1122.94	ug/L	93
77) toluene	12.181	92	396093	48.81	ug/L	98
78) ethyl methacrylate	12.364	69	193804	53.52	ug/L	97
79) trans-1,3-dichloropropene	12.375	75	243877	54.52	ug/L	98
80) 1,1,2-trichloroethane	12.590	83	113842	50.57	ug/L	97
81) tetrachloroethene	12.763	164	127011	49.42	ug/L	97
82) 2-hexanone	12.752	58	208337	210.03	ug/L	99
83) 1,3-dichloropropane	12.768	76	232267	49.02	ug/L	98
84) butyl acetate	12.831	56	99452	49.20	ug/L	95
85) dibromochloromethane	13.035	129	159086	54.77	ug/L	99
86) 1,2-dibromoethane	13.182	107	149587	52.01	ug/L	95
87) n-butyl ether	13.549	57	668757	47.32	ug/L	99
88) chlorobenzene	13.638	112	418367	49.24	ug/L	96
89) 1,1,1,2-tetrachloroethane	13.696	131	160667	52.99	ug/L	99
90) ethylbenzene	13.691	91	722866	49.04	ug/L	98
91) m,p-xylene	13.796	106	554479	96.95	ug/L	95
92) o-xylene	14.215	91	595438	50.07	ug/L	99
93) styrene	14.226	104	470147	53.03	ug/L	99
94) butyl acrylate	14.037	55	283375	52.16	ug/L	97
95) bromoform	14.488	173	101654	57.62	ug/L	98
96) isopropylbenzene	14.551	105	717165	49.08	ug/L	99
97) cis-1,4-dichloro-2-butene	14.624	75	58023	46.24	ug/L	89
100) bromobenzene	14.949	156	183328	51.97	ug/L	94
101) 1,1,2,2-tetrachloroethane	14.855	83	168704	49.67	ug/L	98
102) trans-1,4-dichloro-2-b...	14.897	53	44511	50.53	ug/L	95
103) 1,2,3-trichloropropene	14.928	110	49998	50.47	ug/L	98
104) n-propylbenzene	14.960	91	818649	47.75	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159598.d
 Acq On : 18 Feb 2020 7:59 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:41:19 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

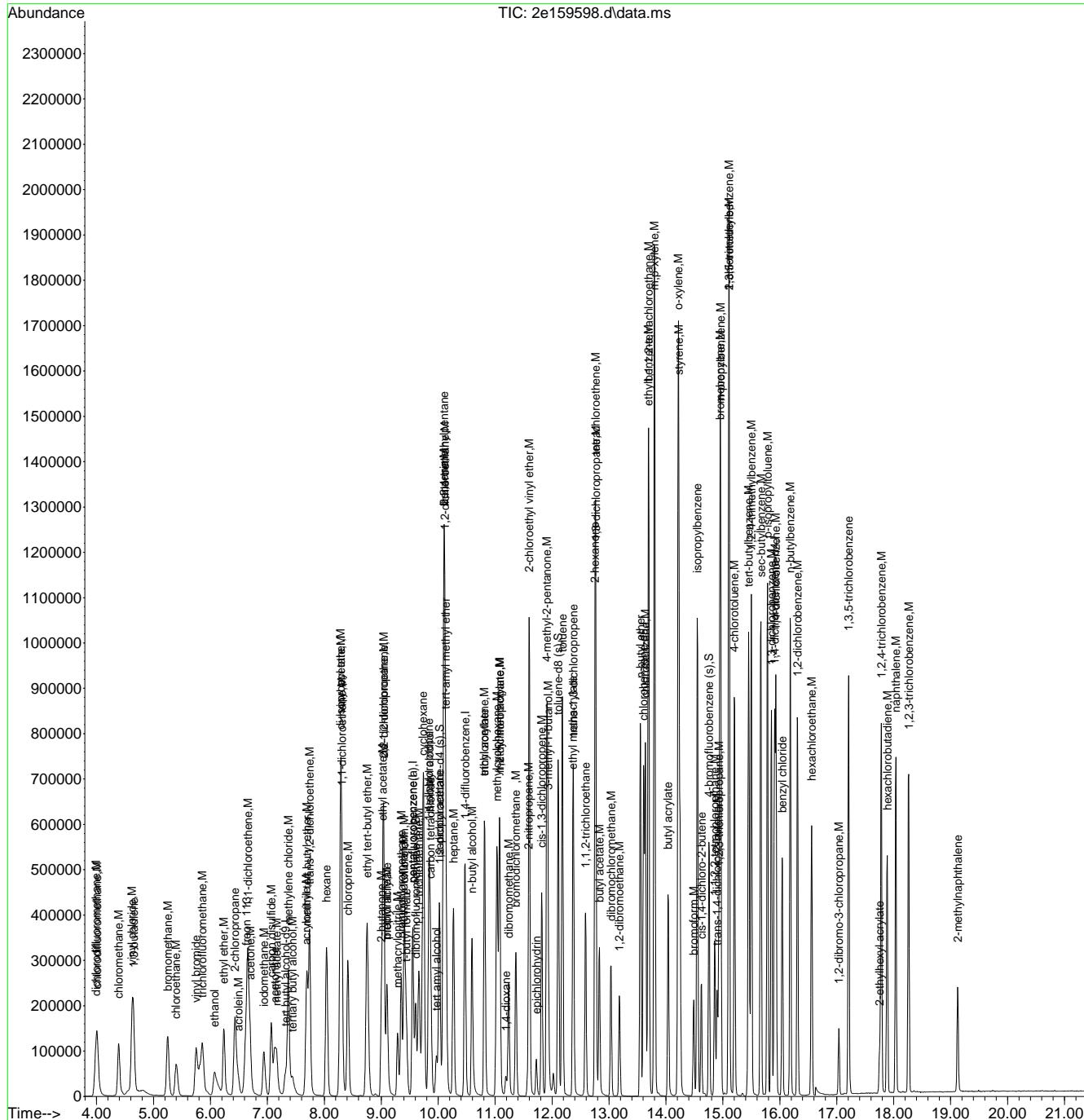
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
105) 2-chlorotoluene	15.106	126	170902	48.10	ug/L	99
106) 4-chlorotoluene	15.201	91	508714	49.18	ug/L	98
107) 1,3,5-trimethylbenzene	15.106	105	611414	49.96	ug/L	97
108) tert-butylbenzene	15.453	119	518775	49.35	ug/L	99
109) 1,2,4-trimethylbenzene	15.500	105	606555	49.93	ug/L	99
110) sec-butylbenzene	15.667	105	751059	48.10	ug/L	100
111) 1,3-dichlorobenzene	15.851	146	340069	50.20	ug/L	99
112) p-isopropyltoluene	15.783	119	642700	48.47	ug/L	98
113) 1,4-dichlorobenzene	15.930	146	348661	50.75	ug/L	99
114) 1,2-dichlorobenzene	16.312	146	335405	49.79	ug/L	98
115) n-butylbenzene	16.181	92	318594	47.19	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.036	157	38126	49.93	ug/L	92
117) 1,3,5-trichlorobenzene	17.209	180	273444	49.47	ug/L	99
118) 1,2,4-trichlorobenzene	17.780	180	242919	49.44	ug/L	99
119) 2-ethylhexyl acrylate	17.749	70	22712	6.52	ug/L	95
120) hexachlorobutadiene	17.885	225	110239	47.13	ug/L	98
121) naphthalene	18.037	128	541378	49.38	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	220816	48.61	ug/L	99
123) hexachloroethane	16.559	201	106497	55.02	ug/L	98
124) benzyl chloride	16.040	91	375607	52.57	ug/L	98
125) 2-methylnaphthalene	19.123	142	116722	20.12	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
Data File : 2e159598.d
Acq On : 18 Feb 2020 7:59 am
Operator : edwarddd
Sample : bs Inst : VOAMS2E
Misc : MS41190,V2E8003,5,,,.1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 00:41:19 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



Mei Chen
 02/20/20 13:20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159623.d
 Acq On : 19 Feb 2020 7:54 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:26:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	132086	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	301821	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.467	114	469821	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.607	117	387064	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	196543	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	301821	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	137151	51.35	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.70%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	149871	53.01	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	106.02%	
76) toluene-d8 (s)	12.108	98	501695	46.93	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.86%	
99) 4-bromofluorobenzene (s)	14.755	95	189331	49.40	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.80%	
Target Compounds						
					Qvalue	
2) ethanol	6.062	45	167240	4653.82	ug/L	94
3) tertiary butyl alcohol	7.431	59	100281	284.69	ug/L	98
4) 1,4-dioxane	11.185	88	42671	1457.08	ug/L	95
6) chlorodifluoromethane	4.007	51	174881	34.41	ug/L	95
7) dichlorodifluoromethane	3.981	85	220344	57.37	ug/L	97
8) chloromethane	4.385	50	208323	39.29	ug/L	99
9) vinyl chloride	4.621	62	227308	43.52	ug/L	99
10) bromomethane	5.244	94	151689	49.07	ug/L	99
11) chloroethane	5.397	64	126895	46.97	ug/L	97
12) trichlorofluoromethane	5.853	101	265729	60.80	ug/L	97
13) 1,3-butadiene	4.642	54	125186	35.42	ug/L	97
14) vinyl bromide	5.748	106	134656	53.33	ug/L	98
15) ethyl ether	6.235	74	89631	47.43	ug/L	94
16) 2-chloropropane	6.429	43	256452	43.18	ug/L	89
17) acrolein	6.487	56	28208	46.97	ug/L	87
18) freon 113	6.623	151	126426	55.81	ug/L	93
19) 1,1-dichloroethene	6.655	61	230589	49.65	ug/L	98
20) acetone	6.692	43	164786	188.81	ug/L	95
21) acetonitrile	7.127	41	186818m	455.91	ug/L	
22) iodomethane	6.938	142	188275	50.09	ug/L	97
23) carbon disulfide	7.069	76	378299	45.48	ug/L	99
24) methylene chloride	7.368	84	166800	50.22	ug/L	92
25) methyl acetate	7.158	43	111820	50.32	ug/L	98
26) methyl tert butyl ether	7.693	73	436130	48.36	ug/L	96
27) trans-1,2-dichloroethene	7.740	61	226776	52.47	ug/L	95
28) hexane	8.039	56	119920	50.56	ug/L	95
29) di-isopropyl ether	8.280	45	569012	48.88	ug/L	97
30) ethyl tert-butyl ether	8.752	59	526351	52.00	ug/L	98
31) 2-butanone	8.998	72	68991	223.81	ug/L	92
32) 1,1-dichloroethane	8.301	63	298878	51.79	ug/L	98
33) chloroprene	8.411	53	261979	55.56	ug/L	98
34) acrylonitrile	7.688	53	57537	50.91	ug/L	96
35) vinyl acetate	8.291	86	37981	59.16	ug/L #	78
36) ethyl acetate	9.019	45	22787	45.47	ug/L #	36
37) 2,2-dichloropropane	9.040	77	254313	50.88	ug/L	99
38) cis-1,2-dichloroethene	9.035	96	189404	53.72	ug/L	93
39) propionitrile	9.098	54	192700	475.05	ug/L	92
40) methyl acrylate	9.109	85	22335	54.71	ug/L #	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159623.d
 Acq On : 19 Feb 2020 7:54 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:26:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	87239	54.31	ug/L	88
42) tetrahydrofuran	9.392	72	19465	48.58	ug/L #	79
43) chloroform	9.402	83	300078	55.71	ug/L	98
44) t-butyl formate	9.434	59	124368	39.81	ug/L	94
45) 1,1-dichloropropene	9.837	75	229179	53.09	ug/L	97
46) carbon tetrachloride	9.864	117	233677	57.16	ug/L	100
47) isopropyl acetate	10.016	87	38434	54.55	ug/L #	80
49) methacrylonitrile	9.287	67	61435	54.28	ug/L	99
50) 1,1,1-trichloroethane	9.659	97	272398	56.83	ug/L	99
51) cyclohexane	9.733	84	248550	50.74	ug/L #	84
52) iso-butyl alcohol	9.837	43	62625	489.15	ug/L	96
53) tert amyl alcohol	9.968	73	43000	255.76	ug/L	93
56) 2,2,4-trimethylpentane	10.100	57	532730	53.01	ug/L	99
57) n-butyl alcohol	10.592	56	238308	2928.29	ug/L	98
58) benzene	10.100	78	684414	50.93	ug/L	100
59) tert-amyl methyl ether	10.131	73	518616	50.00	ug/L	97
60) heptane	10.262	57	118881	51.76	ug/L	99
61) 1,2-dichloroethane	10.115	62	215099	54.27	ug/L	98
62) ethyl acrylate	10.813	55	189234	53.55	ug/L	99
63) trichloroethylene	10.813	95	172668	55.31	ug/L	98
64) 2-nitropropane	11.589	41	53968	55.85	ug/L #	67
65) 2-chloroethyl vinyl ether	11.599	63	474526	254.28	ug/L	97
66) methyl methacrylate	11.080	100	43100	56.82	ug/L #	91
67) 1,2-dichloropropane	11.075	63	170928	50.22	ug/L	95
68) methylcyclohexane	11.033	83	298186	53.58	ug/L	100
69) dibromomethane	11.237	93	96241	53.96	ug/L	91
70) bromodichloromethane	11.363	83	228402	57.41	ug/L	97
71) epichlorohydrin	11.720	57	75959	268.48	ug/L	96
72) cis-1,3-dichloropropene	11.819	75	277010	53.27	ug/L	98
73) 4-methyl-2-pentanone	11.908	58	230226	210.72	ug/L	94
74) 3-methyl-1-butanol	11.929	70	94358	1113.87	ug/L	93
77) toluene	12.181	92	416833	52.80	ug/L	100
78) ethyl methacrylate	12.365	69	194915	55.33	ug/L	98
79) trans-1,3-dichloropropene	12.375	75	245838	56.49	ug/L	97
80) 1,1,2-trichloroethane	12.590	83	114806	52.42	ug/L	97
81) tetrachloroethene	12.763	164	138393	55.35	ug/L	97
82) 2-hexanone	12.753	58	208786	216.35	ug/L	99
83) 1,3-dichloropropane	12.768	76	235236	51.03	ug/L	97
84) butyl acetate	12.831	56	99327	50.50	ug/L	94
85) dibromochloromethane	13.036	129	159796	56.54	ug/L	99
86) 1,2-dibromoethane	13.182	107	151713	54.22	ug/L	95
87) n-butyl ether	13.549	57	698055	50.77	ug/L	98
88) chlorobenzene	13.639	112	433573	52.45	ug/L	97
89) 1,1,1,2-tetrachloroethane	13.696	131	164165	55.66	ug/L	99
90) ethylbenzene	13.691	91	761844	53.12	ug/L	98
91) m,p-xylene	13.796	106	587580	105.60	ug/L	95
92) o-xylene	14.215	91	622506	53.81	ug/L	99
93) styrene	14.226	104	486009	56.35	ug/L	99
94) butyl acrylate	14.037	55	286490	54.21	ug/L	97
95) bromoform	14.488	173	101845	59.34	ug/L	98
96) isopropylbenzene	14.551	105	765275	53.83	ug/L	98
97) cis-1,4-dichloro-2-butene	14.619	75	61819	50.64	ug/L	88
100) bromobenzene	14.949	156	188602	54.81	ug/L	93
101) 1,1,2,2-tetrachloroethane	14.855	83	169926	51.29	ug/L	98
102) trans-1,4-dichloro-2-b...	14.897	53	46654	54.30	ug/L	96
103) 1,2,3-trichloropropane	14.928	110	50944	52.72	ug/L	93
104) n-propylbenzene	14.960	91	874101	52.27	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159623.d
 Acq On : 19 Feb 2020 7:54 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:26:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

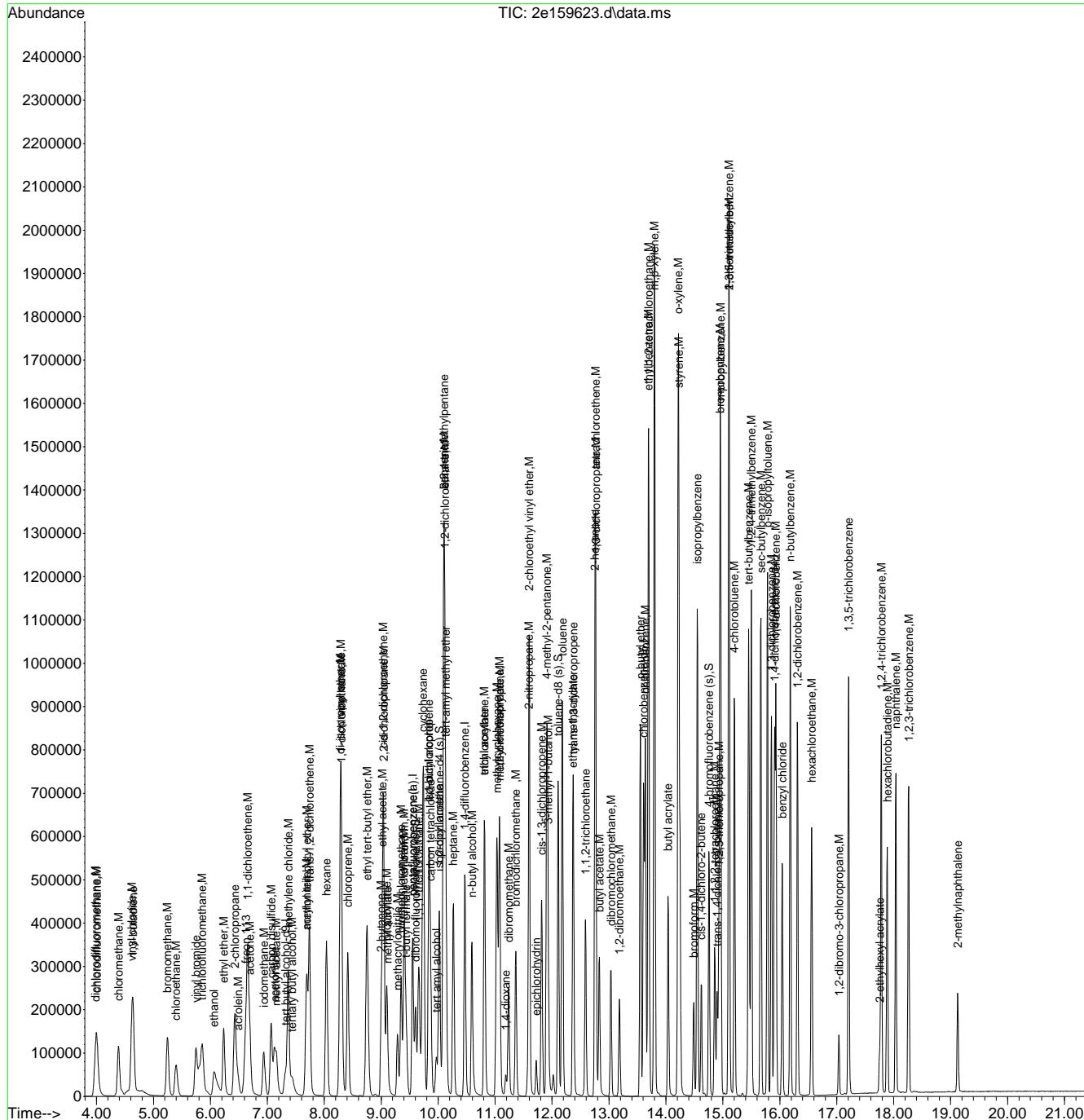
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
105) 2-chlorotoluene	15.107	126	178720	51.57	ug/L	98
106) 4-chlorotoluene	15.201	91	538273	53.35	ug/L	98
107) 1,3,5-trimethylbenzene	15.107	105	642073	53.78	ug/L	97
108) tert-butylbenzene	15.453	119	548693	53.51	ug/L	97
109) 1,2,4-trimethylbenzene	15.500	105	641044	54.10	ug/L	97
110) sec-butylbenzene	15.668	105	796643	52.30	ug/L	99
111) 1,3-dichlorobenzene	15.851	146	350767	53.09	ug/L	99
112) p-isopropyltoluene	15.783	119	685609	53.00	ug/L	98
113) 1,4-dichlorobenzene	15.930	146	359413	53.63	ug/L	99
114) 1,2-dichlorobenzene	16.313	146	347259	52.85	ug/L	98
115) n-butylbenzene	16.181	92	346035	52.55	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.041	157	36711	49.29	ug/L	94
117) 1,3,5-trichlorobenzene	17.209	180	284382	52.75	ug/L	98
118) 1,2,4-trichlorobenzene	17.781	180	245352	51.20	ug/L	98
119) 2-ethylhexyl acrylate	17.754	70	22452	6.61	ug/L	98
120) hexachlorobutadiene	17.885	225	117128	51.34	ug/L	98
121) naphthalene	18.038	128	539081	50.41	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	218534	49.32	ug/L	98
123) hexachloroethane	16.559	201	110960	58.77	ug/L	98
124) benzyl chloride	16.040	91	377526	54.17	ug/L	99
125) 2-methylnaphthalene	19.123	142	112875	19.94	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
Data File : 2e159623.d
Acq On : 19 Feb 2020 7:54 am
Operator : edwardd
Sample : bs Inst : VOAMS2E
Misc : MS37677,V2E8004,5,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 22:26:14 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



Manual Integration Approval Summary

Page 1 of 1

Sample Number: V2E8004-BS
Lab FileID: 2E159623.D
Injection Time: 02/19/20 07:54

Method: SW846 8260C
Analyst approved: 02/19/20 23:08 Dave Moriente
Supervisor approved: 02/20/20 13:20 Mei Chen

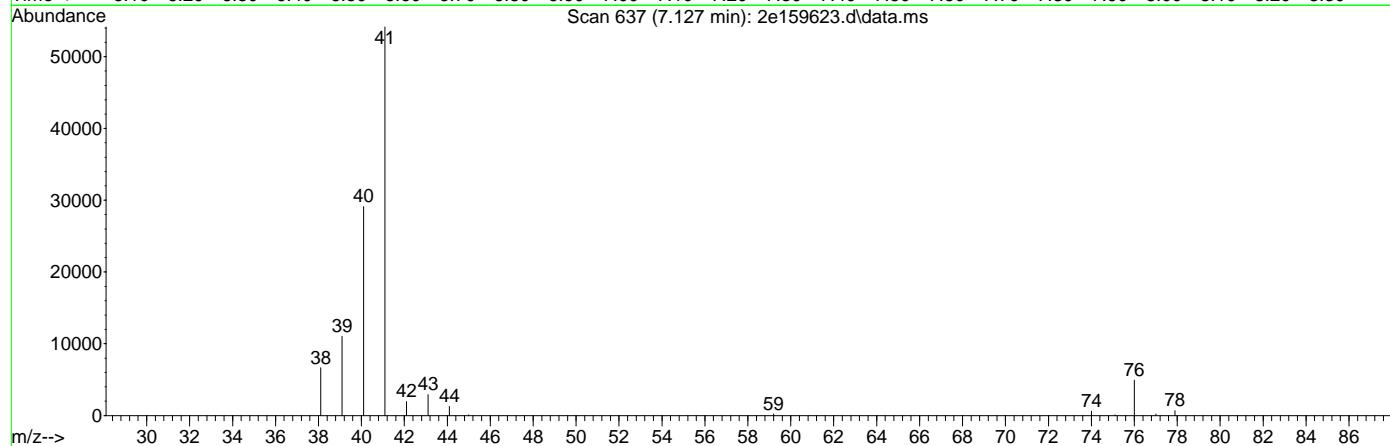
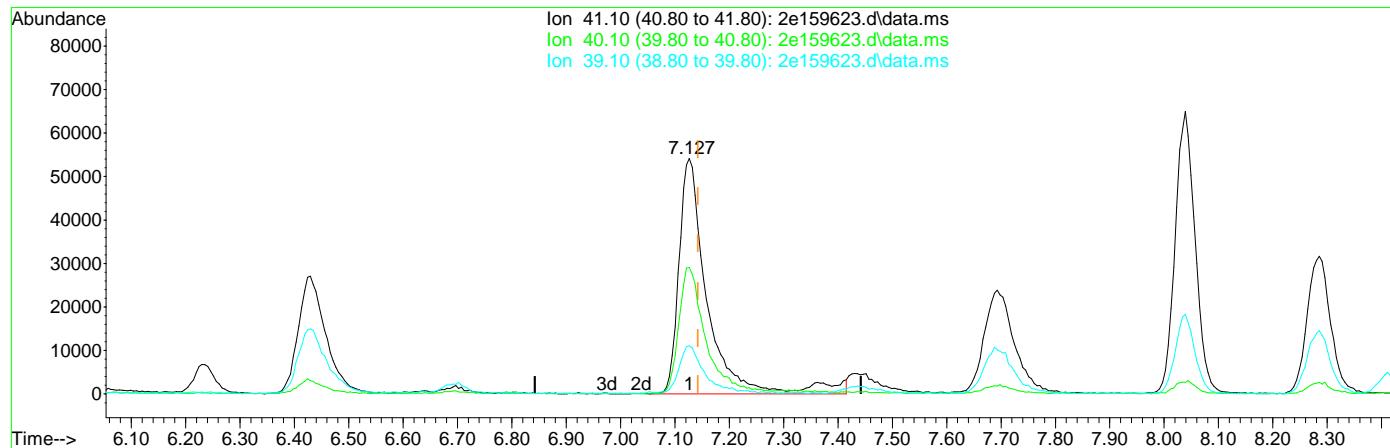
Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetonitrile	75-05-8		7.13	Poor instrument integration

7.3.2.1
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159623.d
 Acq On : 19 Feb 2020 7:54 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 08:31:05 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159623.d\data.ms

(21) acetonitrile

7.127min (-0.016) 483.74ug/L

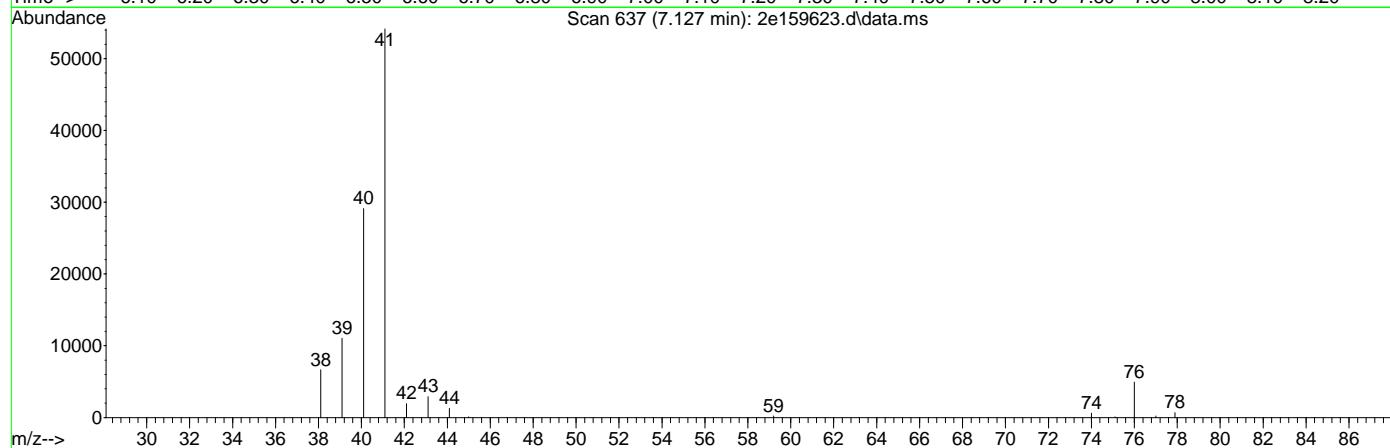
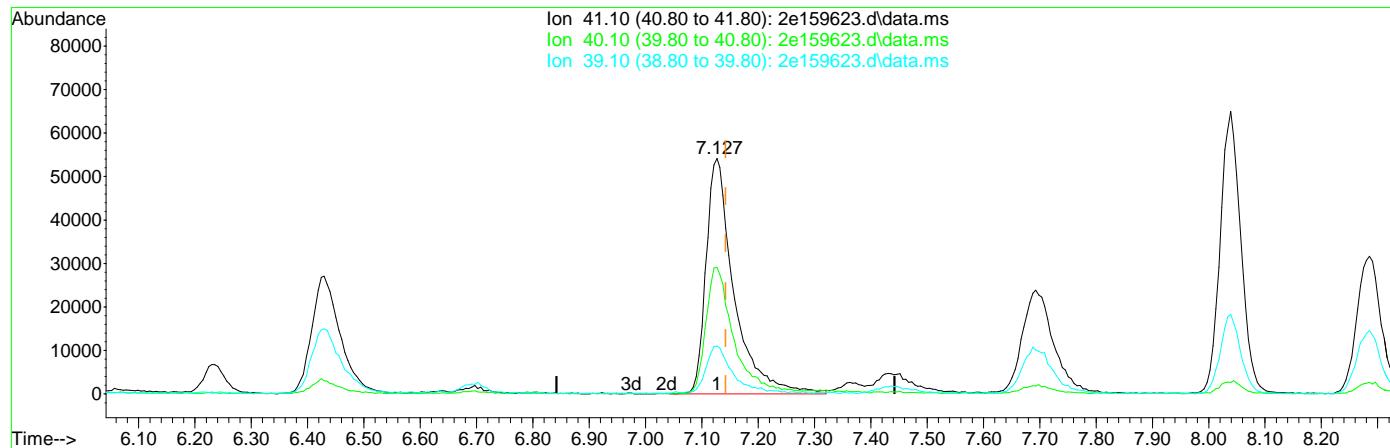
response 198221

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.53
39.10	19.60	19.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159623.d
 Acq On : 19 Feb 2020 7:54 am
 Operator : edwardd
 Sample : bs Inst : VOAMS2E
 Misc : MS37677,V2E8004,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 08:31:05 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159623.d\data.ms

(21) acetonitrile

7.127min (-0.016) 455.91ug/L m

response 186818

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.72
39.10	19.60	20.37
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159608.d
 Acq On : 18 Feb 2020 1:10 pm
 Operator : edwardd
 Sample : JD3298-12ms Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:03:09 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	137022	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	310080	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.467	114	482979	50.00	ug/L	-0.02
75) chlorobenzene-d5	13.607	117	398595	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	203752	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	310080	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	141241	51.47	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.94%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	150323	51.72	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	103.44%	
76) toluene-d8 (s)	12.108	98	518239	47.07	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.14%	
99) 4-bromofluorobenzene (s)	14.755	95	194407	48.93	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.86%	
Target Compounds						
					Qvalue	
2) ethanol	6.068	45	156051	4186.03	ug/L	94
3) tertiary butyl alcohol	7.436	59	98313	269.05	ug/L	95
4) 1,4-dioxane	11.190	88	38044	1252.29	ug/L	99
6) chlorodifluoromethane	4.007	51	255447	48.93	ug/L	95
7) dichlorodifluoromethane	3.981	85	330139	83.67	ug/L	98
8) chloromethane	4.385	50	276114	50.69	ug/L	100
9) vinyl chloride	4.615	62	304490	56.74	ug/L	98
10) bromomethane	5.244	94	189467	59.66	ug/L	98
11) chloroethane	5.402	64	157747	56.84	ug/L	98
12) trichlorofluoromethane	5.853	101	327069	72.84	ug/L	97
13) 1,3-butadiene	4.641	54	193338	53.24	ug/L	95
14) vinyl bromide	5.748	106	168715	65.03	ug/L	98
15) ethyl ether	6.230	74	93256	48.04	ug/L	96
16) 2-chloropropane	6.429	43	289894	47.51	ug/L	90
17) acrolein	6.487	56	31081	50.37	ug/L	99
18) freon 113	6.629	151	149818	64.37	ug/L	95
19) 1,1-dichloroethene	6.655	61	262966	55.12	ug/L	97
20) acetone	6.697	43	150515	167.87	ug/L	97
21) acetonitrile	7.127	41	176796	419.97	ug/L	97
22) iodomethane	6.938	142	213473	55.28	ug/L	97
23) carbon disulfide	7.064	76	470086	55.01	ug/L	99
24) methylene chloride	7.363	84	168340	49.34	ug/L	95
25) methyl acetate	7.163	43	101823	44.60	ug/L	95
26) methyl tert butyl ether	7.698	73	426172	45.99	ug/L	98
27) trans-1,2-dichloroethene	7.740	61	236521	53.26	ug/L	95
28) hexane	8.039	56	147912	60.70	ug/L	93
29) di-isopropyl ether	8.285	45	569205	47.60	ug/L	92
30) ethyl tert-butyl ether	8.752	59	517318	49.75	ug/L	96
31) 2-butanone	8.998	72	63635	200.93	ug/L #	84
32) 1,1-dichloroethane	8.301	63	302799	51.07	ug/L	98
33) chloroprene	8.411	53	275912	56.96	ug/L	96
34) acrylonitrile	7.688	53	52736	45.42	ug/L	96
35) vinyl acetate	8.291	86	36507	55.35	ug/L #	84
36) ethyl acetate	9.025	45	22589	43.87	ug/L #	71
37) 2,2-dichloropropane	9.040	77	263303	51.27	ug/L	98
38) cis-1,2-dichloroethene	9.040	96	187288	51.70	ug/L	94
39) propionitrile	9.098	54	177987	427.09	ug/L	93
40) methyl acrylate	9.109	85	20318	48.45	ug/L #	63

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159608.d
 Acq On : 18 Feb 2020 1:10 pm
 Operator : edwardd
 Sample : JD3298-12ms Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:03:09 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	86301	52.30	ug/L	88
42) tetrahydrofuran	9.397	72	18082	43.93	ug/L #	80
43) chloroform	9.402	83	290630	52.52	ug/L	98
44) t-butyl formate	9.439	59	82055	25.56	ug/L	94
45) 1,1-dichloropropene	9.837	75	234424	52.86	ug/L	97
46) carbon tetrachloride	9.864	117	237464	56.53	ug/L	98
47) isopropyl acetate	10.016	87	35733	49.37	ug/L	94
49) methacrylonitrile	9.282	67	57124	49.13	ug/L	96
50) 1,1,1-trichloroethane	9.659	97	277407	56.33	ug/L	98
51) cyclohexane	9.738	84	311020	61.80	ug/L	92
52) iso-butyl alcohol	9.843	43	60905	463.05	ug/L	97
53) tert amyl alcohol	9.968	73	42542	246.30	ug/L	96
56) 2,2,4-trimethylpentane	10.099	57	634405	61.41	ug/L	100
57) n-butyl alcohol	10.592	56	234550	2803.59	ug/L	98
58) benzene	10.099	78	687130	49.74	ug/L	98
59) tert-amyl methyl ether	10.131	73	500808	46.96	ug/L	98
60) heptane	10.267	57	139915	59.26	ug/L	99
61) 1,2-dichloroethane	10.115	62	202867	49.79	ug/L	100
62) ethyl acrylate	10.813	55	177192	48.78	ug/L	98
63) trichloroethene	10.813	95	172236	53.67	ug/L	99
64) 2-nitropropane	11.578	41	29788	29.99	ug/L #	1
66) methyl methacrylate	11.080	100	41015	52.60	ug/L	96
67) 1,2-dichloropropane	11.075	63	166141	47.49	ug/L	96
68) methylcyclohexane	11.033	83	330365	57.74	ug/L	97
69) dibromomethane	11.237	93	91987	50.17	ug/L	95
70) bromodichloromethane	11.363	83	217986	53.30	ug/L	99
71) epichlorohydrin	11.725	57	66650	229.16	ug/L	95
72) cis-1,3-dichloropropene	11.819	75	262299	49.07	ug/L	97
73) 4-methyl-2-pentanone	11.908	58	218148	194.22	ug/L	91
74) 3-methyl-1-butanol	11.929	70	94878	1089.49	ug/L	93
77) toluene	12.181	92	411581	50.62	ug/L	99
78) ethyl methacrylate	12.364	69	187082	51.57	ug/L	98
79) trans-1,3-dichloropropene	12.375	75	232219	51.81	ug/L	98
80) 1,1,2-trichloroethane	12.590	83	109211	48.43	ug/L	96
81) tetrachloroethene	12.763	164	141230	54.85	ug/L	96
82) 2-hexanone	12.758	58	193642	194.85	ug/L	98
83) 1,3-dichloropropane	12.768	76	221406	46.64	ug/L	100
84) butyl acetate	12.831	56	95446	47.13	ug/L	97
85) dibromochloromethane	13.036	129	152396	52.37	ug/L	98
86) 1,2-dibromoethane	13.182	107	144574	50.17	ug/L	95
87) n-butyl ether	13.549	57	683229	48.25	ug/L	99
88) chlorobenzene	13.639	112	422863	49.68	ug/L	95
89) 1,1,2-tetrachloroethane	13.701	131	158326	52.12	ug/L	99
90) ethylbenzene	13.691	91	750190	50.80	ug/L	99
91) m,p-xylene	13.801	106	580290	101.28	ug/L	96
92) o-xylene	14.215	91	608061	51.04	ug/L	100
93) styrene	14.226	104	474975	53.48	ug/L	100
94) butyl acrylate	14.037	55	286044	52.56	ug/L	98
95) bromoform	14.488	173	95827	54.22	ug/L	96
96) isopropylbenzene	14.551	105	758582	51.82	ug/L	99
97) cis-1,4-dichloro-2-butene	14.624	75	55250	43.95	ug/L	89
100) bromobenzene	14.949	156	181291	50.82	ug/L	96
101) 1,1,2,2-tetrachloroethane	14.855	83	160525	46.74	ug/L	97
102) trans-1,4-dichloro-2-b...	14.897	53	41908	47.05	ug/L	96
103) 1,2,3-trichloropropane	14.928	110	46055	45.98	ug/L	97
104) n-propylbenzene	14.960	91	868508	50.09	ug/L	100
105) 2-chlorotoluene	15.107	126	175816	48.94	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159608.d
 Acq On : 18 Feb 2020 1:10 pm
 Operator : edwardd
 Sample : JD3298-12ms Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:03:09 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

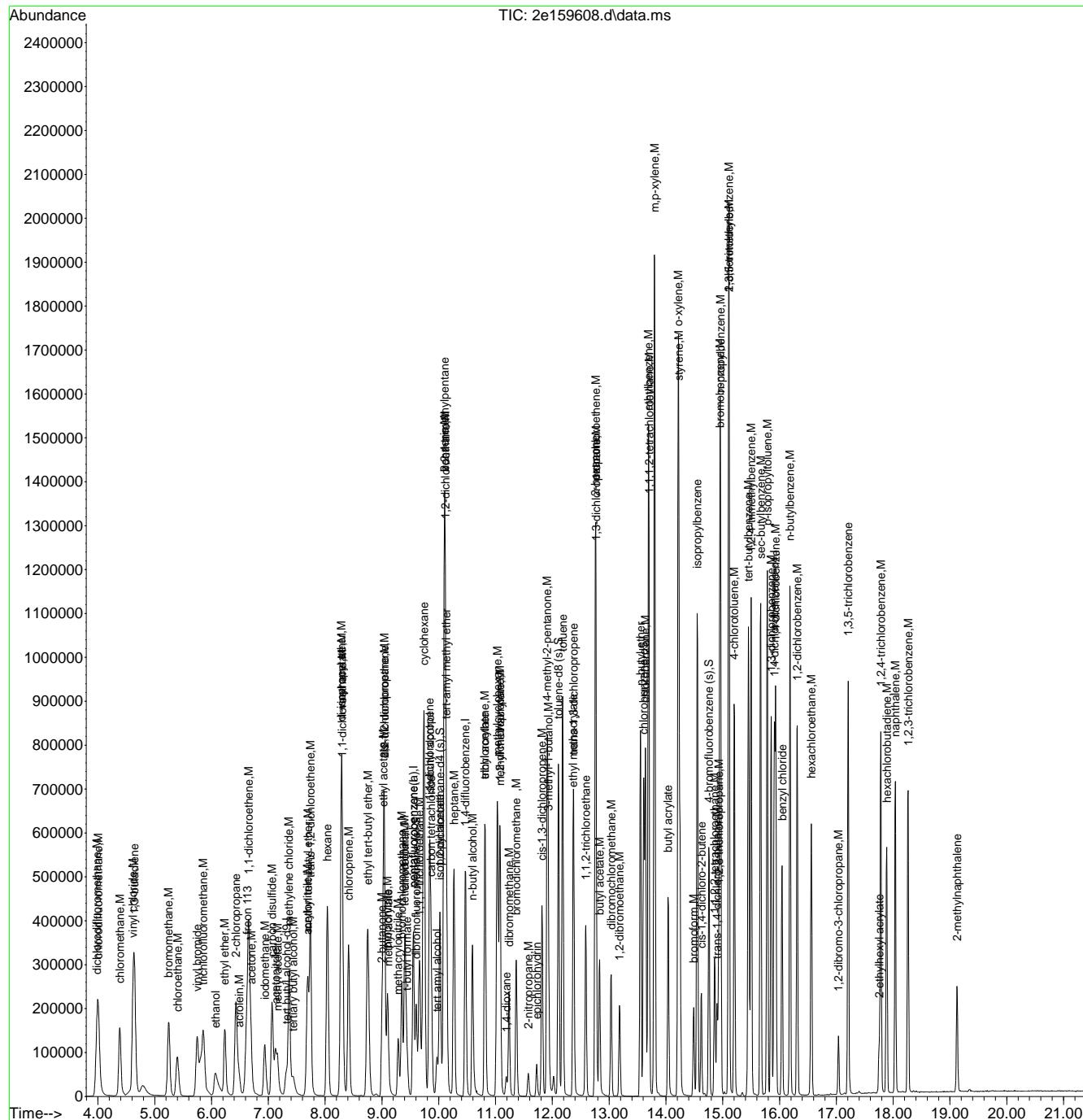
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.201	91	523327	50.04	ug/L	98
107) 1,3,5-trimethylbenzene	15.107	105	632165	51.08	ug/L	97
108) tert-butylbenzene	15.453	119	548654	51.61	ug/L	99
109) 1,2,4-trimethylbenzene	15.500	105	638594	51.98	ug/L	97
110) sec-butylbenzene	15.668	105	809346	51.25	ug/L	99
111) 1,3-dichlorobenzene	15.851	146	344003	50.22	ug/L	98
112) p-isopropyltoluene	15.783	119	686850	51.22	ug/L	98
113) 1,4-dichlorobenzene	15.930	146	348635	50.18	ug/L	99
114) 1,2-dichlorobenzene	16.312	146	336414	49.39	ug/L	98
115) n-butylbenzene	16.181	92	349654	51.22	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.036	157	34840	45.12	ug/L	94
117) 1,3,5-trichlorobenzene	17.209	180	282751	50.59	ug/L	97
118) 1,2,4-trichlorobenzene	17.781	180	245421	49.40	ug/L	98
119) 2-ethylhexyl acrylate	17.754	70	24667	7.00	ug/L	93
120) hexachlorobutadiene	17.885	225	122151	51.64	ug/L	97
121) naphthalene	18.037	128	524292	47.29	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	215766	46.97	ug/L	99
123) hexachloroethane	16.559	201	111143	56.79	ug/L	96
124) benzyl chloride	16.045	91	370237	51.24	ug/L	98
125) 2-methylnaphthalene	19.123	142	121362	20.68	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159608.d
 Acq On : 18 Feb 2020 1:10 pm
 Operator : edwardd
 Sample : JD3298-12ms
 Misc : MS41200,V2E8003,,,,1
 ALS Vial : 13 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:03:09 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159609.d
 Acq On : 18 Feb 2020 1:41 pm
 Operator : edwardd
 Sample : JD3298-12msd Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:04:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	133528	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	309423	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	482788	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.612	117	401371	50.00	ug/L	-0.01
98) 1,4-dichlorobenzene-d4	15.909	152	202683	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	309423	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.606	113	141833	51.80	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.60%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	150864	51.93	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	103.86%	
76) toluene-d8 (s)	12.107	98	518323	46.75	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.50%	
99) 4-bromofluorobenzene (s)	14.755	95	193769	49.03	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.06%	
Target Compounds						
					Qvalue	
2) ethanol	6.067	45	153613	4228.45	ug/L	93
3) tertiary butyl alcohol	7.436	59	95543	268.31	ug/L	97
4) 1,4-dioxane	11.190	88	38666	1306.07	ug/L	96
6) chlorodifluoromethane	4.012	51	250798	48.14	ug/L	94
7) dichlorodifluoromethane	3.991	85	318962	81.01	ug/L	99
8) chloromethane	4.395	50	260938	48.01	ug/L	99
9) vinyl chloride	4.626	62	283614	52.96	ug/L	98
10) bromomethane	5.255	94	177780	56.10	ug/L	98
11) chloroethane	5.402	64	146751	52.99	ug/L	99
12) trichlorofluoromethane	5.863	101	309666	69.11	ug/L	95
13) 1,3-butadiene	4.652	54	193989	53.53	ug/L	96
14) vinyl bromide	5.753	106	156345	60.39	ug/L	100
15) ethyl ether	6.235	74	92099	47.54	ug/L	98
16) 2-chloropropane	6.434	43	293008	48.13	ug/L	91
17) acrolein	6.487	56	31248	50.75	ug/L	98
18) freon 113	6.639	151	156124	67.22	ug/L	94
19) 1,1-dichloroethene	6.665	61	268751	56.45	ug/L	97
20) acetone	6.702	43	151579	169.41	ug/L	98
21) acetonitrile	7.132	41	174852	416.23	ug/L	96
22) iodomethane	6.943	142	213451	55.39	ug/L	96
23) carbon disulfide	7.069	76	477387	55.98	ug/L	99
24) methylene chloride	7.373	84	171421	50.35	ug/L	93
25) methyl acetate	7.168	43	102646	45.06	ug/L	99
26) methyl tert butyl ether	7.698	73	425817	46.05	ug/L	96
27) trans-1,2-dichloroethene	7.745	61	241698	54.54	ug/L	97
28) hexane	8.039	56	159016	65.40	ug/L	93
29) di-isopropyl ether	8.285	45	569483	47.72	ug/L	98
30) ethyl tert-butyl ether	8.752	59	515425	49.67	ug/L	98
31) 2-butanone	9.004	72	63619	201.31	ug/L	93
32) 1,1-dichloroethane	8.306	63	305306	51.60	ug/L	96
33) chloroprene	8.416	53	277237	57.35	ug/L	99
34) acrylonitrile	7.693	53	53809	46.44	ug/L	99
35) vinyl acetate	8.296	86	35753	54.32	ug/L #	78
36) ethyl acetate	9.025	45	23052	44.87	ug/L #	65
37) 2,2-dichloropropane	9.045	77	259275	50.60	ug/L	99
38) cis-1,2-dichloroethene	9.040	96	190065	52.58	ug/L	94
39) propionitrile	9.103	54	177767	427.47	ug/L	88
40) methyl acrylate	9.108	85	20428	48.81	ug/L #	76

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159609.d
 Acq On : 18 Feb 2020 1:41 pm
 Operator : edwardd
 Sample : JD3298-12msd Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:04:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	85357	51.84	ug/L	86
42) tetrahydrofuran	9.402	72	17979	43.77	ug/L #	73
43) chloroform	9.407	83	292173	52.91	ug/L	98
44) t-butyl formate	9.444	59	62803	19.61	ug/L	96
45) 1,1-dichloropropene	9.837	75	239464	54.11	ug/L	98
46) carbon tetrachloride	9.869	117	239743	57.20	ug/L	98
47) isopropyl acetate	10.021	87	35750	49.50	ug/L #	85
49) methacrylonitrile	9.292	67	57312	49.39	ug/L	91
50) 1,1,1-trichloroethane	9.659	97	278200	56.61	ug/L	95
51) cyclohexane	9.738	84	299321	59.60	ug/L	93
52) iso-butyl alcohol	9.842	43	59358	452.24	ug/L	97
53) tert amyl alcohol	9.968	73	42094	244.22	ug/L	94
56) 2,2,4-trimethylpentane	10.099	57	678824	65.74	ug/L	100
57) n-butyl alcohol	10.592	56	224949	2689.89	ug/L	98
58) benzene	10.105	78	683405	49.49	ug/L	99
59) tert-amyl methyl ether	10.131	73	501726	47.07	ug/L	99
60) heptane	10.267	57	149532	63.36	ug/L	96
61) 1,2-dichloroethane	10.115	62	203165	49.88	ug/L	98
62) ethyl acrylate	10.812	55	178004	49.02	ug/L	100
63) trichloroethene	10.812	95	172201	53.68	ug/L	96
64) 2-nitropropane	11.578	41	30222	30.44	ug/L #	1
66) methyl methacrylate	11.080	100	39737	50.98	ug/L	93
67) 1,2-dichloropropane	11.075	63	167568	47.91	ug/L	93
68) methylcyclohexane	11.033	83	345040	60.33	ug/L	100
69) dibromomethane	11.237	93	92194	50.30	ug/L	94
70) bromodichloromethane	11.363	83	217770	53.27	ug/L	99
71) epichlorohydrin	11.725	57	64222	220.90	ug/L	94
72) cis-1,3-dichloropropene	11.819	75	265480	49.68	ug/L	98
73) 4-methyl-2-pentanone	11.908	58	218063	194.22	ug/L	93
74) 3-methyl-1-butanol	11.929	70	91504	1051.17	ug/L	95
77) toluene	12.181	92	412760	50.42	ug/L	99
78) ethyl methacrylate	12.364	69	188082	51.49	ug/L	97
79) trans-1,3-dichloropropene	12.375	75	232465	51.51	ug/L	96
80) 1,1,2-trichloroethane	12.590	83	110424	48.63	ug/L	97
81) tetrachloroethene	12.763	164	140722	54.28	ug/L	99
82) 2-hexanone	12.758	58	194482	194.35	ug/L	99
83) 1,3-dichloropropane	12.768	76	225315	47.13	ug/L	99
84) butyl acetate	12.831	56	95442	46.80	ug/L	97
85) dibromochloromethane	13.035	129	153997	52.55	ug/L	96
86) 1,2-dibromoethane	13.182	107	145699	50.21	ug/L	97
87) n-butyl ether	13.549	57	696632	48.86	ug/L	98
88) chlorobenzene	13.638	112	421279	49.15	ug/L	96
89) 1,1,2-tetrachloroethane	13.701	131	159297	52.08	ug/L	98
90) ethylbenzene	13.691	91	761938	51.24	ug/L	99
91) m,p-xylene	13.801	106	585772	101.53	ug/L	96
92) o-xylene	14.215	91	616245	51.37	ug/L	100
93) styrene	14.226	104	479018	53.56	ug/L	99
94) butyl acrylate	14.037	55	287793	52.51	ug/L	96
95) bromoform	14.488	173	95904	53.89	ug/L	99
96) isopropylbenzene	14.551	105	763357	51.78	ug/L	100
97) cis-1,4-dichloro-2-butene	14.624	75	56723	44.81	ug/L	87
100) bromobenzene	14.949	156	183344	51.67	ug/L	94
101) 1,1,2,2-tetrachloroethane	14.855	83	160413	46.95	ug/L	97
102) trans-1,4-dichloro-2-b...	14.897	53	42603	48.08	ug/L	94
103) 1,2,3-trichloropropane	14.928	110	46928	47.09	ug/L	97
104) n-propylbenzene	14.960	91	876251	50.81	ug/L	99
105) 2-chlorotoluene	15.106	126	175782	49.18	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159609.d
 Acq On : 18 Feb 2020 1:41 pm
 Operator : edwardd
 Sample : JD3298-12msd Inst : VOAMS2E
 Misc : MS41200,V2E8003,5,,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:04:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

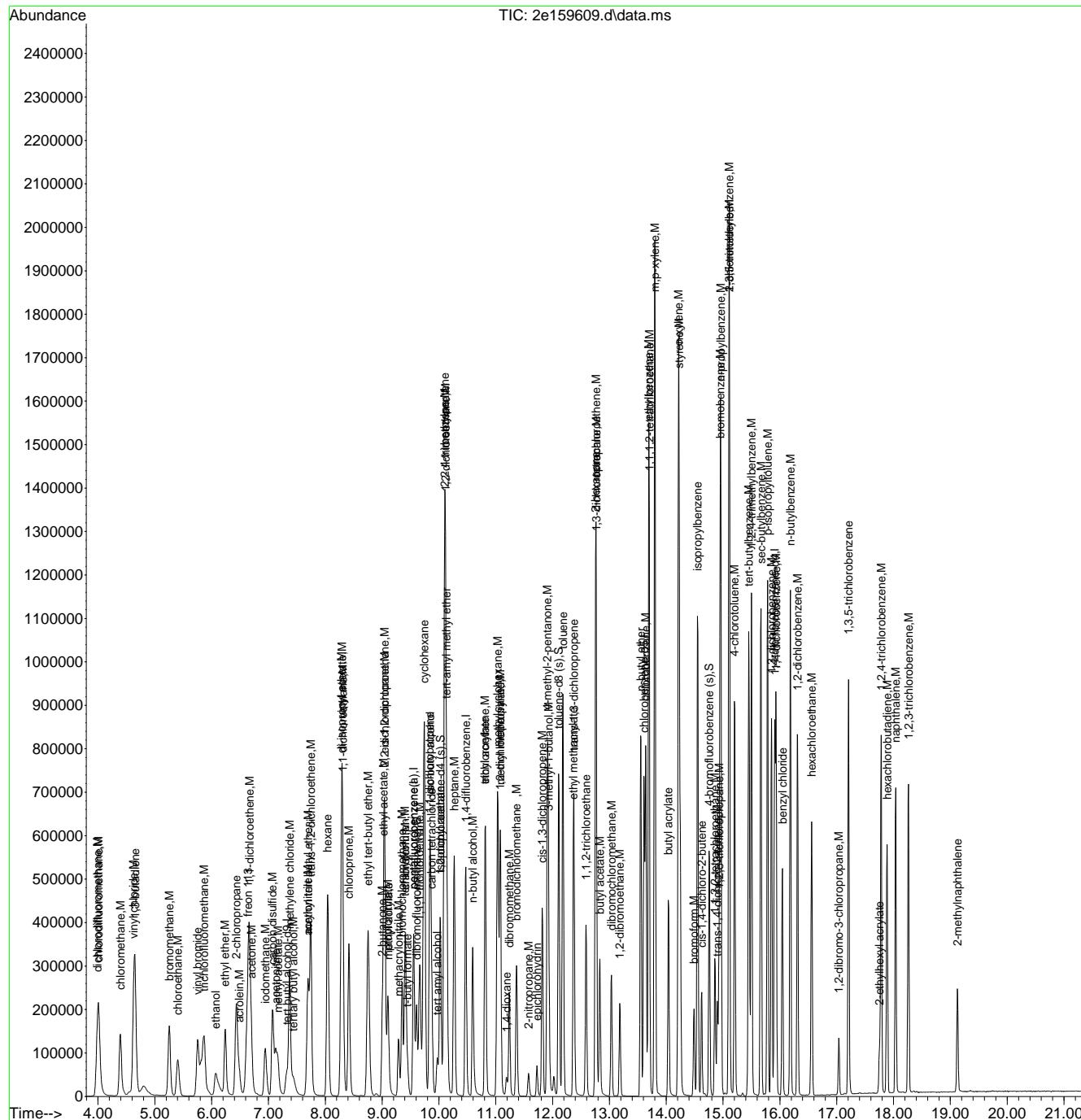
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.201	91	526497	50.60	ug/L	97
107) 1,3,5-trimethylbenzene	15.106	105	638023	51.83	ug/L	97
108) tert-butylbenzene	15.452	119	550496	52.06	ug/L	98
109) 1,2,4-trimethylbenzene	15.500	105	641374	52.48	ug/L	97
110) sec-butylbenzene	15.667	105	810825	51.62	ug/L	99
111) 1,3-dichlorobenzene	15.851	146	345880	50.76	ug/L	99
112) p-isopropyltoluene	15.783	119	692104	51.89	ug/L	98
113) 1,4-dichlorobenzene	15.935	146	349997	50.64	ug/L	99
114) 1,2-dichlorobenzene	16.312	146	338615	49.98	ug/L	99
115) n-butylbenzene	16.186	92	350251	51.58	ug/L	98
116) 1,2-dibromo-3-chloropr...	17.036	157	34683	45.15	ug/L	94
117) 1,3,5-trichlorobenzene	17.209	180	284557	51.18	ug/L	97
118) 1,2,4-trichlorobenzene	17.780	180	244539	49.48	ug/L	97
119) 2-ethylhexyl acrylate	17.749	70	23940	6.83	ug/L	96
120) hexachlorobutadiene	17.885	225	122401	52.02	ug/L	97
121) naphthalene	18.037	128	521874	47.32	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	215785	47.23	ug/L	98
123) hexachloroethane	16.559	201	112130	57.59	ug/L	97
124) benzyl chloride	16.045	91	366183	50.95	ug/L	98
125) 2-methylnaphthalene	19.128	142	119578	20.49	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159609.d
 Acq On : 18 Feb 2020 1:41 pm
 Operator : edwardd
 Sample : JD3298-12msd
 Misc : MS41200,V2E8003,5,,,1
 ALS Vial : 14 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 01:04:13 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159630.d
 Acq On : 19 Feb 2020 11:33 am
 Operator : edwardd
 Sample : JD3298-6ms Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:41:16 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	117962	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	298917	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	466212	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	386348	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	196932	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	298917	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	137140	51.84	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.68%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	147937	52.73	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	105.46%	
76) toluene-d8 (s)	12.107	98	498053	46.67	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.34%	
99) 4-bromofluorobenzene (s)	14.755	95	185113	48.20	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.40%	
Target Compounds						
				Qvalue		
2) ethanol	6.067	45	138381	4311.82	ug/L	91
3) tertiary butyl alcohol	7.436	59	86648	275.44	ug/L	95
4) 1,4-dioxane	11.190	88	35046	1340.00	ug/L	100
6) chlorodifluoromethane	4.012	51	229841	45.67	ug/L	96
7) dichlorodifluoromethane	3.981	85	307872	80.94	ug/L	98
8) chloromethane	4.390	50	256197	48.79	ug/L	98
9) vinyl chloride	4.620	62	282009	54.51	ug/L	99
10) bromomethane	5.250	94	176531	57.66	ug/L	98
11) chloroethane	5.396	64	146719	54.84	ug/L	97
12) trichlorofluoromethane	5.858	101	319762	73.87	ug/L	99
13) 1,3-butadiene	4.647	54	168386	48.10	ug/L	96
14) vinyl bromide	5.748	106	155984	62.37	ug/L	98
15) ethyl ether	6.235	74	83267	44.49	ug/L	95
16) 2-chloropropane	6.429	43	270216	45.94	ug/L	91
17) acrolein	6.487	56	27436	46.13	ug/L	98
18) freon 113	6.628	151	142387	63.46	ug/L	91
19) 1,1-dichloroethene	6.660	61	245564	53.39	ug/L	97
20) acetone	6.702	43	139415	161.29	ug/L	100
21) acetonitrile	7.127	41	165038	406.68	ug/L	97
22) iodomethane	6.938	142	196473	52.78	ug/L	96
23) carbon disulfide	7.069	76	433387	52.61	ug/L	99
24) methylene chloride	7.368	84	158411	48.16	ug/L	95
25) methyl acetate	7.163	43	98078	44.57	ug/L	98
26) methyl tert butyl ether	7.698	73	404195	45.25	ug/L	97
27) trans-1,2-dichloroethene	7.740	61	227919	53.24	ug/L	93
28) hexane	8.039	56	137695	58.62	ug/L	91
29) di-isopropyl ether	8.285	45	525221	45.56	ug/L	96
30) ethyl tert-butyl ether	8.752	59	483258	48.21	ug/L	98
31) 2-butanone	8.998	72	61325	200.87	ug/L #	77
32) 1,1-dichloroethane	8.306	63	283714	49.64	ug/L	98
33) chloroprene	8.411	53	254369	54.47	ug/L	97
34) acrylonitrile	7.688	53	51944	46.41	ug/L	99
35) vinyl acetate	8.290	86	34753	54.66	ug/L #	74
36) ethyl acetate	9.019	45	21784	43.89	ug/L #	37
37) 2,2-dichloropropane	9.045	77	248536	50.21	ug/L	99
38) cis-1,2-dichloroethene	9.040	96	179051	51.27	ug/L	94
39) propionitrile	9.098	54	168215	418.72	ug/L	96
40) methyl acrylate	9.108	85	19538	48.33	ug/L #	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159630.d
 Acq On : 19 Feb 2020 11:33 am
 Operator : edwardd
 Sample : JD3298-6ms Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:41:16 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	82387	51.79	ug/L #	83
42) tetrahydrofuran	9.397	72	17203	43.36	ug/L #	85
43) chloroform	9.407	83	279863	52.46	ug/L	99
44) t-butyl formate	9.439	59	82636	26.71	ug/L	94
45) 1,1-dichloropropene	9.837	75	224042	52.40	ug/L	99
46) carbon tetrachloride	9.863	117	231164	57.09	ug/L	98
47) isopropyl acetate	10.015	87	34314	49.18	ug/L #	81
49) methacrylonitrile	9.287	67	54592	48.70	ug/L	93
50) 1,1,1-trichloroethane	9.664	97	266019	56.04	ug/L	97
51) cyclohexane	9.738	84	295240	60.86	ug/L	93
52) iso-butyl alcohol	9.842	43	54228	427.68	ug/L	95
53) tert amyl alcohol	9.968	73	36755	220.74	ug/L	90
56) 2,2,4-trimethylpentane	10.099	57	584878	58.65	ug/L	99
57) n-butyl alcohol	10.592	56	199402	2469.18	ug/L	98
58) benzene	10.099	78	647753	48.58	ug/L	98
59) tert-amyl methyl ether	10.131	73	478305	46.47	ug/L	97
60) heptane	10.267	57	128464	56.37	ug/L	98
61) 1,2-dichloroethane	10.115	62	197961	50.33	ug/L	99
62) ethyl acrylate	10.812	55	168929	48.18	ug/L	98
63) trichloroethene	10.812	95	161824	52.24	ug/L	99
64) 2-nitropropane	11.578	41	29524	30.79	ug/L #	1
66) methyl methacrylate	11.085	100	38134	50.66	ug/L #	82
67) 1,2-dichloropropane	11.075	63	160064	47.39	ug/L	92
68) methylcyclohexane	11.033	83	307812	55.74	ug/L	99
69) dibromomethane	11.237	93	90439	51.10	ug/L	97
70) bromodichloromethane	11.363	83	212934	53.94	ug/L	99
71) epichlorohydrin	11.725	57	63430	225.93	ug/L	94
72) cis-1,3-dichloropropene	11.819	75	257562	49.91	ug/L	97
73) 4-methyl-2-pentanone	11.908	58	208461	192.27	ug/L	94
74) 3-methyl-1-butanol	11.929	70	79665	947.70	ug/L	92
77) toluene	12.181	92	393894	49.98	ug/L	97
78) ethyl methacrylate	12.364	69	178893	50.88	ug/L	98
79) trans-1,3-dichloropropene	12.375	75	230566	53.08	ug/L	97
80) 1,1,2-trichloroethane	12.590	83	105260	48.15	ug/L	99
81) tetrachloroethene	12.763	164	135656	54.36	ug/L	99
82) 2-hexanone	12.752	58	185176	192.24	ug/L	99
83) 1,3-dichloropropane	12.768	76	217374	47.24	ug/L	98
84) butyl acetate	12.831	56	91926	46.83	ug/L	94
85) dibromochloromethane	13.035	129	150094	53.21	ug/L	99
86) 1,2-dibromoethane	13.182	107	141026	50.49	ug/L	96
87) n-butyl ether	13.549	57	656403	47.83	ug/L	99
88) chlorobenzene	13.638	112	410797	49.79	ug/L	97
89) 1,1,2,2-tetrachloroethane	13.696	131	155062	52.67	ug/L	98
90) ethylbenzene	13.691	91	722048	50.44	ug/L	99
91) m,p-xylene	13.801	106	559864	100.81	ug/L	94
92) o-xylene	14.215	91	592270	51.29	ug/L	99
93) styrene	14.226	104	460585	53.50	ug/L	99
94) butyl acrylate	14.037	55	269396	51.07	ug/L	98
95) bromoform	14.488	173	94277	55.03	ug/L	95
96) isopropylbenzene	14.551	105	727179	51.25	ug/L	99
97) cis-1,4-dichloro-2-butene	14.624	75	56023	45.98	ug/L	87
100) bromobenzene	14.949	156	179401	52.03	ug/L	93
101) 1,1,2,2-tetrachloroethane	14.855	83	158584	47.77	ug/L	97
102) trans-1,4-dichloro-2-b...	14.897	53	41870	48.63	ug/L	95
103) 1,2,3-trichloropropane	14.928	110	46415	47.94	ug/L	98
104) n-propylbenzene	14.960	91	841956	50.24	ug/L	99
105) 2-chlorotoluene	15.106	126	169857	48.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159630.d
 Acq On : 19 Feb 2020 11:33 am
 Operator : edwardd
 Sample : JD3298-6ms Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:41:16 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

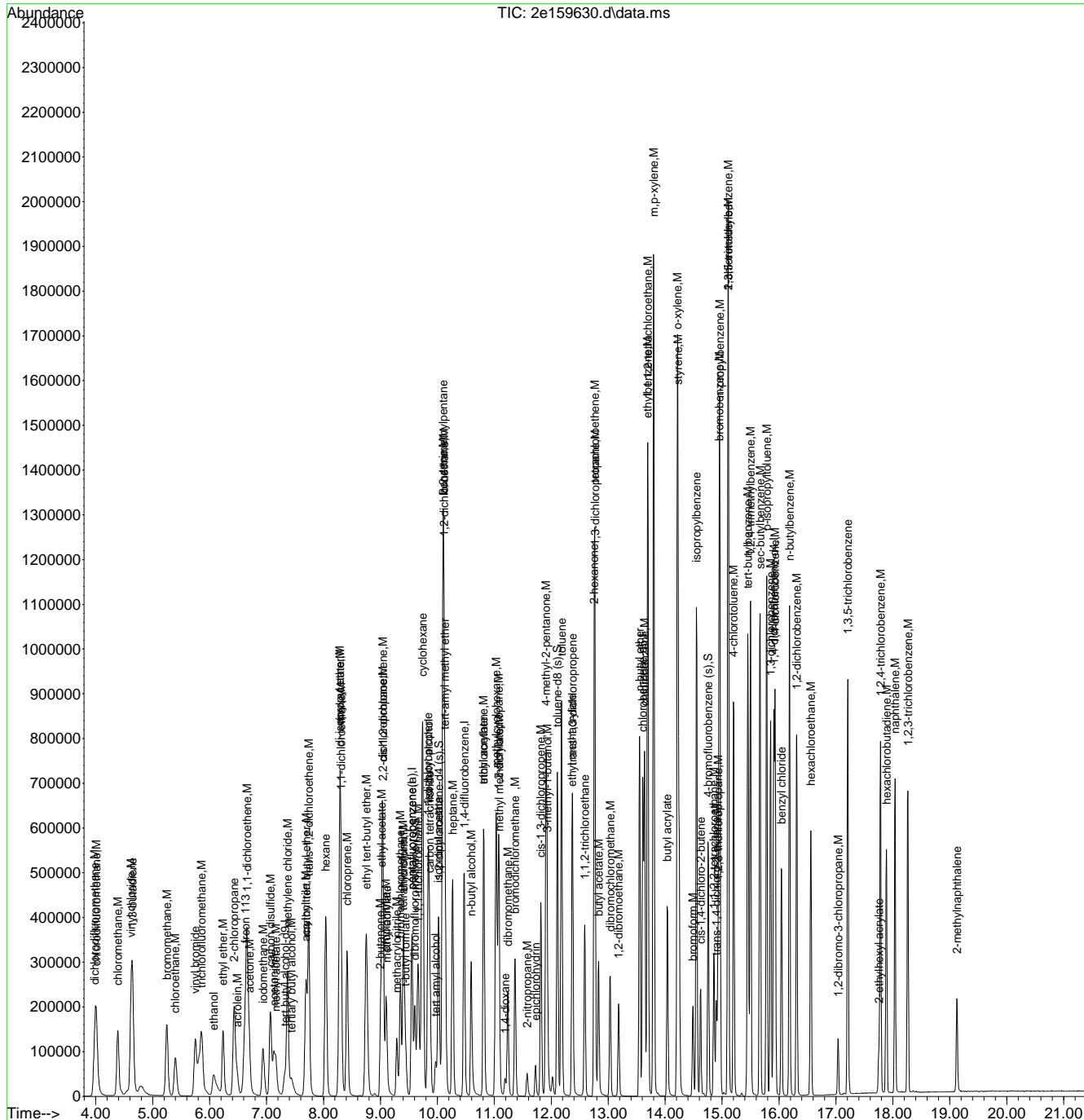
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.201	91	512006	50.65	ug/L	96
107) 1,3,5-trimethylbenzene	15.106	105	614668	51.39	ug/L	97
108) tert-butylbenzene	15.452	119	528258	51.41	ug/L	99
109) 1,2,4-trimethylbenzene	15.500	105	612061	51.55	ug/L	98
110) sec-butylbenzene	15.667	105	775584	50.82	ug/L	100
111) 1,3-dichlorobenzene	15.851	146	335005	50.60	ug/L	99
112) p-isopropyltoluene	15.783	119	663891	51.22	ug/L	99
113) 1,4-dichlorobenzene	15.930	146	342849	51.06	ug/L	99
114) 1,2-dichlorobenzene	16.312	146	328312	49.87	ug/L	99
115) n-butylbenzene	16.187	92	329390	49.92	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.041	157	33697	45.15	ug/L	96
117) 1,3,5-trichlorobenzene	17.209	180	274241	50.77	ug/L	98
118) 1,2,4-trichlorobenzene	17.780	180	233861	48.70	ug/L	99
119) 2-ethylhexyl acrylate	17.754	70	21434	6.30	ug/L	93
120) hexachlorobutadiene	17.885	225	117231	51.28	ug/L	98
121) naphthalene	18.037	128	501037	46.76	ug/L	100
122) 1,2,3-trichlorobenzene	18.263	180	210036	47.31	ug/L	99
123) hexachloroethane	16.559	201	107961	57.07	ug/L	99
124) benzyl chloride	16.040	91	366398	52.47	ug/L	96
125) 2-methylnaphthalene	19.123	142	104895	18.50	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
Data File : 2e159630.d
Acq On : 19 Feb 2020 11:33 am
Operator : edwardd
Sample : JD3298-6ms Inst : VOAMS2E
Misc : MS41200,V2E8004,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 22:41:16 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159631.d
 Acq On : 19 Feb 2020 12:04 pm
 Operator : edwardd
 Sample : JD3298-6msd
 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:42:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	124544	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	308046	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	482103	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	397345	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	203027	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	308046	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.601	113	140884	51.68	ug/L	-0.02
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.36%	
55) 1,2-dichloroethane-d4 (s)	10.021	65	153200	52.81	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	105.62%	
76) toluene-d8 (s)	12.108	98	514396	46.87	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.74%	
99) 4-bromofluorobenzene (s)	14.755	95	192846	48.71	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.42%	
Target Compounds						
					Qvalue	
2) ethanol	6.073	45	144359	4260.37	ug/L	98
3) tertiary butyl alcohol	7.441	59	87685	264.00	ug/L	98
4) 1,4-dioxane	11.190	88	36848	1334.44	ug/L	96
6) chlorodifluoromethane	4.007	51	233729	45.06	ug/L	95
7) dichlorodifluoromethane	3.986	85	301119	76.82	ug/L	99
8) chloromethane	4.385	50	247916	45.81	ug/L	99
9) vinyl chloride	4.615	62	272997	51.21	ug/L	98
10) bromomethane	5.244	94	171150	54.24	ug/L	100
11) chloroethane	5.391	64	138971	50.40	ug/L	99
12) trichlorofluoromethane	5.847	101	305425	68.47	ug/L	96
13) 1,3-butadiene	4.641	54	169896	47.09	ug/L	96
14) vinyl bromide	5.742	106	148593	57.66	ug/L	97
15) ethyl ether	6.241	74	86950	45.09	ug/L	95
16) 2-chloropropane	6.429	43	269128	44.40	ug/L	91
17) acrolein	6.487	56	29066	47.42	ug/L	96
18) freon 113	6.623	151	139446	60.31	ug/L	97
19) 1,1-dichloroethene	6.655	61	246359	51.98	ug/L	100
20) acetone	6.697	43	144479	162.20	ug/L	99
21) acetonitrile	7.127	41	169246	404.69	ug/L	99
22) iodomethane	6.933	142	195028	50.84	ug/L	97
23) carbon disulfide	7.064	76	428805	50.51	ug/L	99
24) methylene chloride	7.368	84	159052	46.92	ug/L	95
25) methyl acetate	7.163	43	99787	44.00	ug/L	99
26) methyl tert butyl ether	7.693	73	409057	44.44	ug/L	97
27) trans-1,2-dichloroethene	7.740	61	230402	52.23	ug/L	93
28) hexane	8.039	56	137435	56.77	ug/L	89
29) di-isopropyl ether	8.285	45	532652	44.83	ug/L	94
30) ethyl tert-butyl ether	8.752	59	490558	47.49	ug/L	96
31) 2-butanone	9.004	72	61826	196.51	ug/L	93
32) 1,1-dichloroethane	8.301	63	287186	48.76	ug/L	98
33) chloroprene	8.411	53	259076	53.83	ug/L	98
34) acrylonitrile	7.688	53	53336	46.24	ug/L	96
35) vinyl acetate	8.291	86	34186	52.17	ug/L #	70
36) ethyl acetate	9.030	45	21965	42.94	ug/L #	36
37) 2,2-dichloropropane	9.046	77	249930	48.99	ug/L	100
38) cis-1,2-dichloroethene	9.040	96	179753	49.95	ug/L	94
39) propionitrile	9.098	54	173572	419.25	ug/L	95
40) methyl acrylate	9.108	85	19946	47.87	ug/L #	83

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159631.d
 Acq On : 19 Feb 2020 12:04 pm
 Operator : edwardd
 Sample : JD3298-6msd
 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:42:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	83461	50.91	ug/L #	86
42) tetrahydrofuran	9.397	72	17943	43.88	ug/L	89
43) chloroform	9.402	83	282562	51.40	ug/L	98
44) t-butyl formate	9.439	59	74379	23.33	ug/L	96
45) 1,1-dichloropropene	9.837	75	224746	51.01	ug/L	96
46) carbon tetrachloride	9.863	117	229519	55.00	ug/L	96
47) isopropyl acetate	10.021	87	34870	48.49	ug/L #	87
49) methacrylonitrile	9.287	67	55660	48.18	ug/L	97
50) 1,1,1-trichloroethane	9.664	97	266253	54.42	ug/L	97
51) cyclohexane	9.738	84	280666	56.14	ug/L #	85
52) iso-butyl alcohol	9.843	43	56605	433.20	ug/L	93
53) tert amyl alcohol	9.968	73	37949	221.16	ug/L	99
56) 2,2,4-trimethylpentane	10.099	57	581702	56.41	ug/L	99
57) n-butyl alcohol	10.592	56	208671	2498.79	ug/L	99
58) benzene	10.099	78	652798	47.34	ug/L	98
59) tert-amyl methyl ether	10.131	73	487553	45.80	ug/L	97
60) heptane	10.267	57	129799	55.08	ug/L	98
61) 1,2-dichloroethane	10.115	62	199706	49.10	ug/L	99
62) ethyl acrylate	10.812	55	172148	47.48	ug/L	99
63) trichloroethene	10.812	95	164484	51.35	ug/L	99
64) 2-nitropropane	11.578	41	29798	30.05	ug/L #	1
66) methyl methacrylate	11.080	100	39492	50.74	ug/L	94
67) 1,2-dichloropropane	11.075	63	159976	45.81	ug/L	95
68) methylcyclohexane	11.033	83	308190	53.97	ug/L	99
69) dibromomethane	11.237	93	90746	49.58	ug/L	96
70) bromodichloromethane	11.363	83	215199	52.71	ug/L	99
71) epichlorohydrin	11.725	57	65386	225.22	ug/L	98
72) cis-1,3-dichloropropene	11.819	75	261102	48.93	ug/L	98
73) 4-methyl-2-pentanone	11.908	58	214336	191.18	ug/L	91
74) 3-methyl-1-butanol	11.929	70	81466	937.18	ug/L	93
77) toluene	12.181	92	394592	48.69	ug/L	98
78) ethyl methacrylate	12.370	69	182407	50.44	ug/L	95
79) trans-1,3-dichloropropene	12.375	75	232128	51.96	ug/L	97
80) 1,1,2-trichloroethane	12.585	83	107656	47.89	ug/L	95
81) tetrachloroethene	12.763	164	135836	52.92	ug/L	97
82) 2-hexanone	12.758	58	191546	193.35	ug/L	98
83) 1,3-dichloropropane	12.768	76	220883	46.67	ug/L	98
84) butyl acetate	12.831	56	93578	46.35	ug/L	93
85) dibromochloromethane	13.036	129	151776	52.32	ug/L	100
86) 1,2-dibromoethane	13.182	107	141595	49.29	ug/L	93
87) n-butyl ether	13.549	57	668589	47.37	ug/L	99
88) chlorobenzene	13.638	112	414074	48.80	ug/L	97
89) 1,1,2,2-tetrachloroethane	13.696	131	157533	52.03	ug/L	98
90) ethylbenzene	13.691	91	733730	49.84	ug/L	99
91) m,p-xylene	13.801	106	563469	98.65	ug/L	96
92) o-xylene	14.215	91	594779	50.08	ug/L	100
93) styrene	14.226	104	465656	52.59	ug/L	99
94) butyl acrylate	14.037	55	273652	50.44	ug/L	97
95) bromoform	14.488	173	96083	54.53	ug/L	97
96) isopropylbenzene	14.551	105	736358	50.46	ug/L	99
97) cis-1,4-dichloro-2-butene	14.624	75	57496	45.88	ug/L	88
100) bromobenzene	14.949	156	179749	50.57	ug/L	95
101) 1,1,2,2-tetrachloroethane	14.855	83	160590	46.92	ug/L	99
102) trans-1,4-dichloro-2-b...	14.897	53	43257	48.74	ug/L	95
103) 1,2,3-trichloropropane	14.928	110	47210	47.30	ug/L	96
104) n-propylbenzene	14.960	91	847740	49.07	ug/L	100
105) 2-chlorotoluene	15.107	126	170622	47.66	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159631.d
 Acq On : 19 Feb 2020 12:04 pm
 Operator : edwardd
 Sample : JD3298-6msd Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:42:14 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

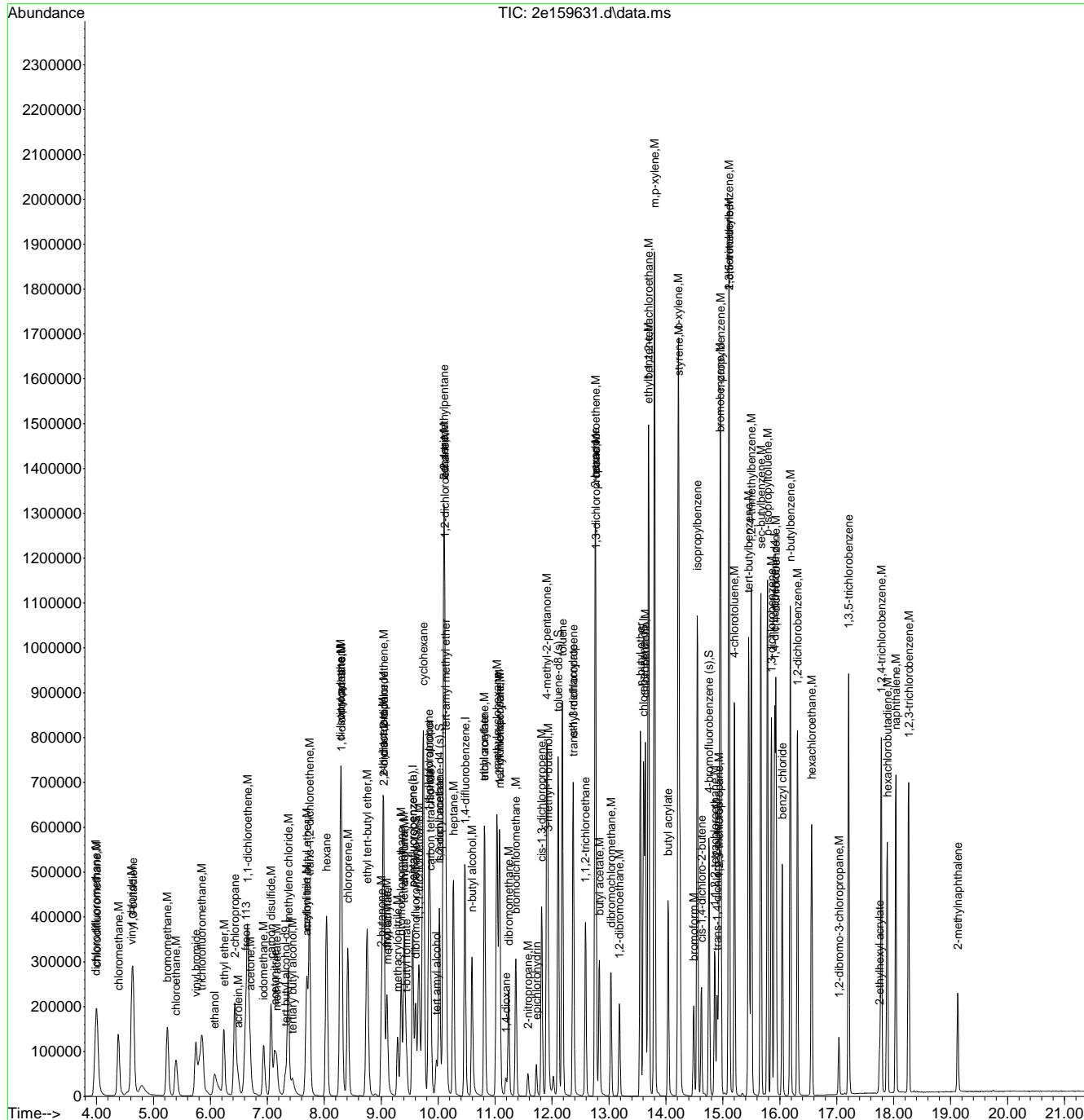
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.201	91	513494	49.27	ug/L	97
107) 1,3,5-trimethylbenzene	15.107	105	615461	49.91	ug/L	96
108) tert-butylbenzene	15.453	119	530946	50.12	ug/L	97
109) 1,2,4-trimethylbenzene	15.500	105	619091	50.57	ug/L	96
110) sec-butylbenzene	15.668	105	776120	49.33	ug/L	100
111) 1,3-dichlorobenzene	15.851	146	335689	49.18	ug/L	98
112) p-isopropyltoluene	15.783	119	665022	49.77	ug/L	97
113) 1,4-dichlorobenzene	15.930	146	345434	49.90	ug/L	98
114) 1,2-dichlorobenzene	16.312	146	329266	48.51	ug/L	99
115) n-butylbenzene	16.187	92	332132	48.82	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.041	157	34892	45.35	ug/L	95
117) 1,3,5-trichlorobenzene	17.209	180	275411	49.45	ug/L	96
118) 1,2,4-trichlorobenzene	17.780	180	238310	48.14	ug/L	98
119) 2-ethylhexyl acrylate	17.749	70	22640	6.45	ug/L	97
120) hexachlorobutadiene	17.885	225	118046	50.09	ug/L	97
121) naphthalene	18.037	128	513800	46.51	ug/L	100
122) 1,2,3-trichlorobenzene	18.263	180	210696	46.03	ug/L	99
123) hexachloroethane	16.559	201	108781	55.78	ug/L	98
124) benzyl chloride	16.040	91	368118	51.13	ug/L	97
125) 2-methylnaphthalene	19.128	142	112510	19.24	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

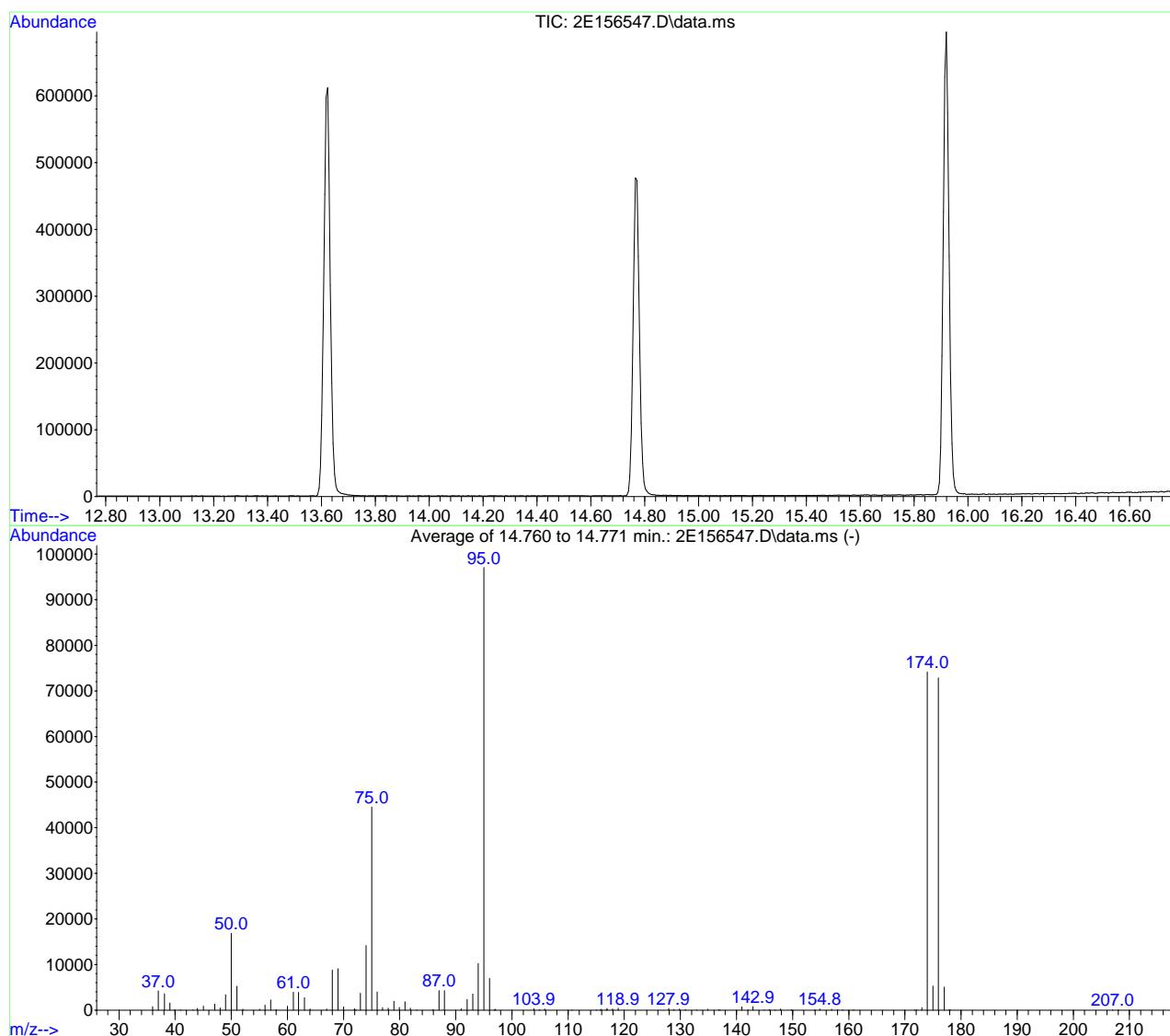
Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
Data File : 2e159631.d
Acq On : 19 Feb 2020 12:04 pm
Operator : edwardd
Sample : JD3298-6msd Inst : VOAMS2E
Misc : MS41200,V2E8004,5,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 22:42:14 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



SW-846 Method 8260
 Data File : C:\msdchem\1\data\V2E6949\2E156547.D Vial: 7
 Acq On : 9 Oct 2019 2:58 pm Operator: roberts
 Sample : bfb Inst : VOAMS2E
 Misc : MS37796,V2E6949,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60MX0.25MMx1.4UM



AutoFind: Scans 2093, 2094, 2095; Background Corrected with Scan 2084

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.3	16804	PASS
75	95	30	60	45.9	44533	PASS
95	95	100	100	100.0	97061	PASS
96	95	5	9	7.1	6930	PASS
173	174	0.00	2	0.7	530	PASS
174	95	50	120	76.4	74171	PASS
175	174	5	9	7.1	5280	PASS
176	174	95	101	98.2	72867	PASS
177	176	5	9	6.9	5060	PASS

Average of 14.760 to 14.771 min.: 2E156547.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	795	49.00	3348	63.05	2723	76.00	3996
37.00	4236	50.00	16804	64.05	268	76.95	554
38.10	3614	51.00	5229	67.00	236	77.95	416
39.05	1563	52.05	224	68.00	8798	78.95	1943
39.95	60	55.05	202	69.00	9072	79.95	591
41.00	56	56.00	1111	70.00	706	80.95	1826
43.20	28	57.00	2222	71.95	295	81.90	402
43.95	365	58.05	88	72.20	115	83.00	39
45.05	859	60.00	874	73.00	3715	85.95	126
47.05	1337	61.05	3916	74.00	14187	87.00	4264
48.00	493	62.00	3849	75.00	44533	87.95	4260

Average of 14.760 to 14.771 min.: 2E156547.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.95	292	110.70	50	130.90	118	147.85	241
92.00	2362	115.00	23	132.90	52	149.80	90
93.00	3517	115.70	57	134.90	172	153.90	24
94.00	10224	115.95	183	136.90	77	154.85	239
95.00	97061	116.80	148	137.10	43	156.95	190
96.00	6930	116.95	354	140.95	720	158.00	24
96.90	96	117.90	285	142.10	28	158.90	83
97.05	175	118.90	423	142.95	788	160.85	111
103.90	319	127.90	371	144.95	56	171.80	24
104.90	106	128.85	140	145.85	125	172.10	28
105.85	287	129.85	273	146.90	36	173.00	530

Average of 14.760 to 14.771 min.: 2E156547.D\data.ms

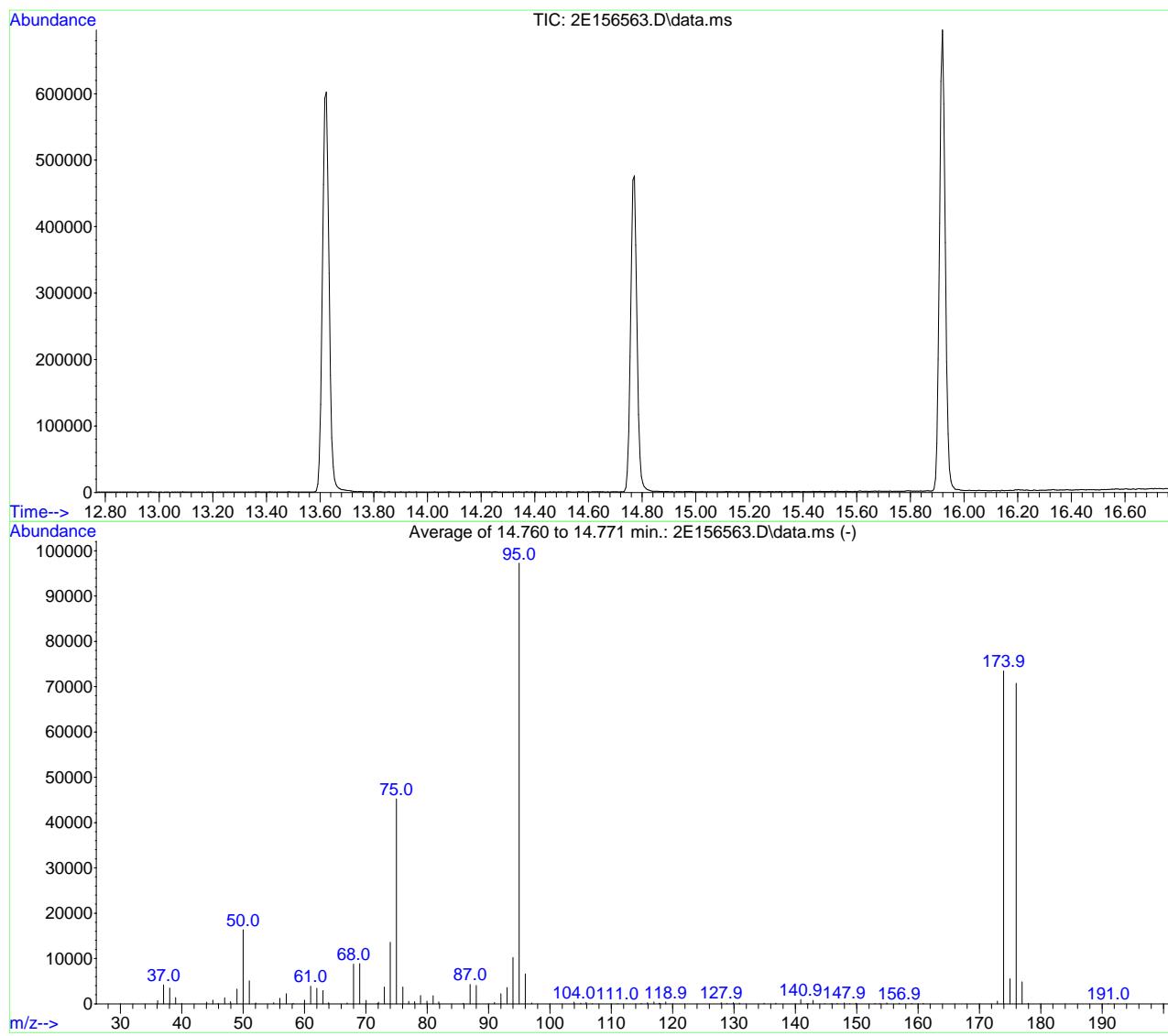
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.00	74171						
175.00	5280						
175.95	72867						
177.00	5060						
177.90	65						
178.05	108						
207.00	52						
208.00	24						

SW-846 Method 8260
 Data File : C:\msdchem\1\data\V2E6949\2E156563.D Vial: 2
 Acq On : 10 Oct 2019 8:55 am Operator: roberts
 Sample : bfb2 Inst : VOAMS2E
 Misc : MS37796,V2E6949,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60MX0.25MMx1.4UM



AutoFind: Scans 2093, 2094, 2095; Background Corrected with Scan 2085

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	16357	PASS
75	95	30	60	46.5	45229	PASS
95	95	100	100	100.0	97245	PASS
96	95	5	9	6.8	6619	PASS
173	174	0.00	2	0.8	588	PASS
174	95	50	120	75.6	73472	PASS
175	174	5	9	7.5	5514	PASS
176	174	95	101	96.3	70725	PASS
177	176	5	9	6.9	4868	PASS

Average of 14.760 to 14.771 min.: 2E156563.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	732	50.00	16357	63.95	254	77.00	548
37.05	4167	51.00	5087	66.95	210	77.95	474
38.05	3465	52.05	227	68.00	8754	78.90	1857
39.00	1375	55.00	240	69.00	8876	79.95	574
40.00	49	56.00	1212	70.05	759	80.95	1779
44.05	363	57.05	2253	71.90	107	81.90	400
45.05	819	58.15	94	72.05	350	85.85	81
45.90	30	60.00	805	73.00	3719	87.00	4282
47.00	1318	61.00	3906	74.00	13603	88.00	4067
47.95	456	62.00	3427	75.00	45229	90.95	298
49.00	3252	63.00	2925	76.05	3695	92.00	2212

Average of 14.760 to 14.771 min.: 2E156563.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.00	3603	115.90	275	140.90	912	153.75	56
94.00	10231	116.95	405	141.90	34	154.90	201
95.00	97245	117.80	168	142.10	31	156.95	136
96.00	6619	118.00	102	142.90	783	158.95	85
97.05	213	118.90	406	144.80	51	160.85	101
103.95	347	127.90	278	145.95	114	172.95	588
105.05	131	128.90	101	146.85	90	173.95	73472
105.90	328	129.90	264	147.95	228	175.00	5514
106.90	25	130.90	118	148.90	25	176.00	70725
111.00	30	134.90	168	149.90	148	176.95	4868
114.90	71	136.85	150	153.00	85	177.95	87

Average of 14.760 to 14.771 min.: 2E156563.D\data.ms

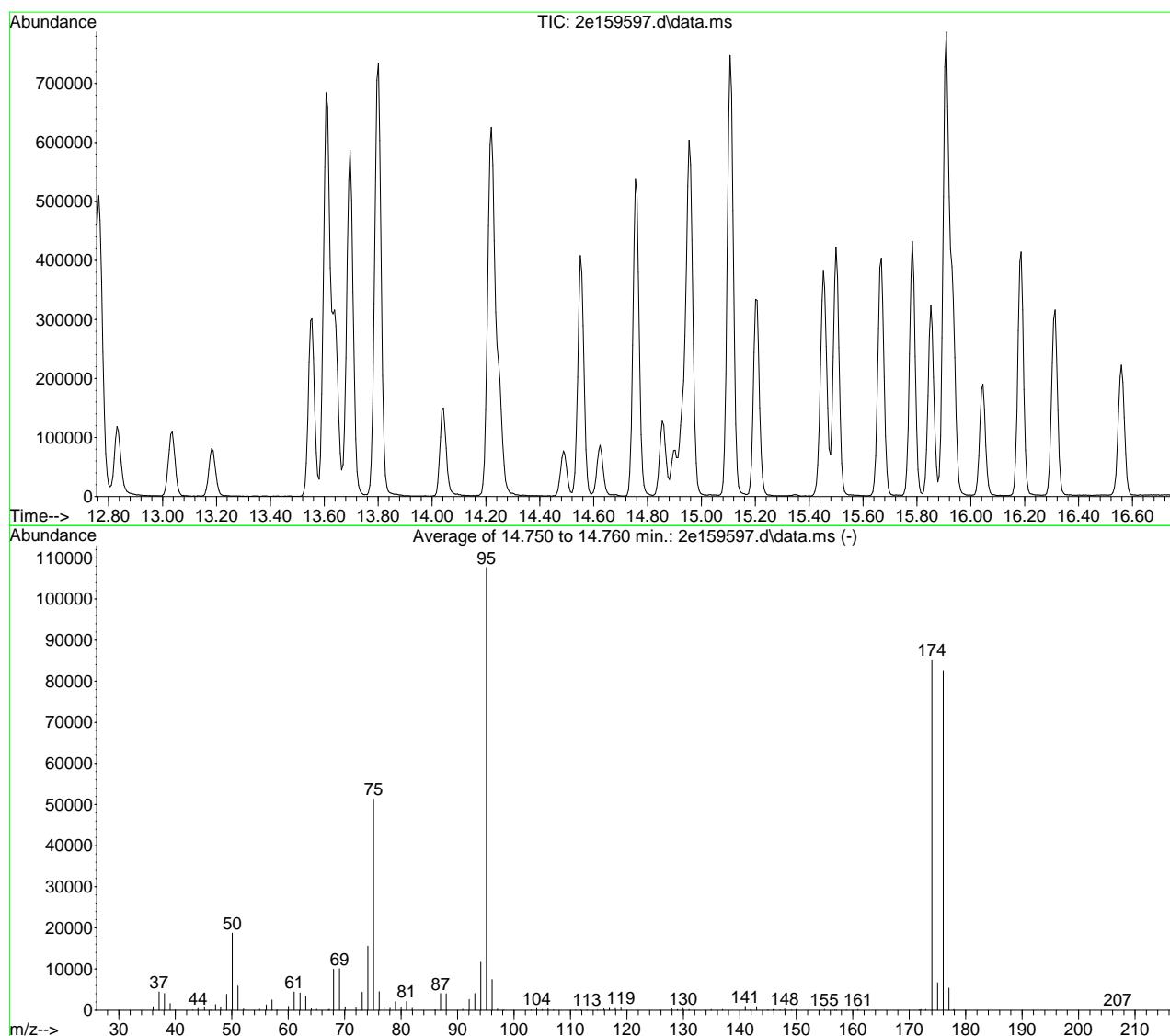
bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
191.00	24						

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ni...20\v2e8003\2e159597.d Vial: 2
 Acq On : 18 Feb 2020 7:21 am Operator: edwardd
 Sample : bfb Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60MX0.25MMx1.4UM



AutoFind: Scans 2091, 2092, 2093; Background Corrected with Scan 2083

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	18757	PASS
75	95	30	60	47.7	51328	PASS
95	95	100	100	100.0	107653	PASS
96	95	5	9	6.9	7418	PASS
173	174	0.00	2	0.2	172	PASS
174	95	50	120	79.2	85208	PASS
175	174	5	9	7.9	6703	PASS
176	174	95	101	96.9	82576	PASS
177	176	5	9	6.5	5368	PASS

Average of 14.750 to 14.760 min.: 2e159597.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	875	49.10	3849	63.10	3333	75.10	51328
37.10	4437	50.10	18757	64.10	328	76.10	4481
38.10	4045	51.10	5853	65.00	227	77.00	704
39.10	1633	52.10	268	67.10	95	78.05	473
40.00	12	54.95	240	67.25	201	79.00	2014
43.10	33	56.10	1285	68.05	9937	80.00	801
44.00	432	57.10	2495	69.10	10095	80.95	2078
45.15	679	58.05	60	70.10	728	81.95	475
46.30	25	60.05	901	72.00	605	86.00	73
47.10	1324	61.05	4448	73.10	4365	87.00	4048
48.05	747	62.10	4148	74.10	15621	88.00	3964

Average of 14.750 to 14.760 min.: 2e159597.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.90	241	106.00	346	128.95	141	147.95	288
92.05	2620	107.00	30	129.95	424	149.15	63
93.05	4057	110.90	24	131.00	153	149.95	146
94.10	11665	111.80	25	134.90	184	154.95	232
95.10	107653	112.90	56	136.95	141	156.85	76
96.10	7418	114.80	39	140.95	891	157.10	39
97.05	262	115.95	322	141.90	136	158.85	66
98.20	36	116.90	492	142.95	859	160.90	132
103.00	66	117.95	395	144.95	124	171.80	80
104.00	430	118.95	509	145.90	161	172.05	145
104.95	172	127.95	346	147.10	43	172.90	172

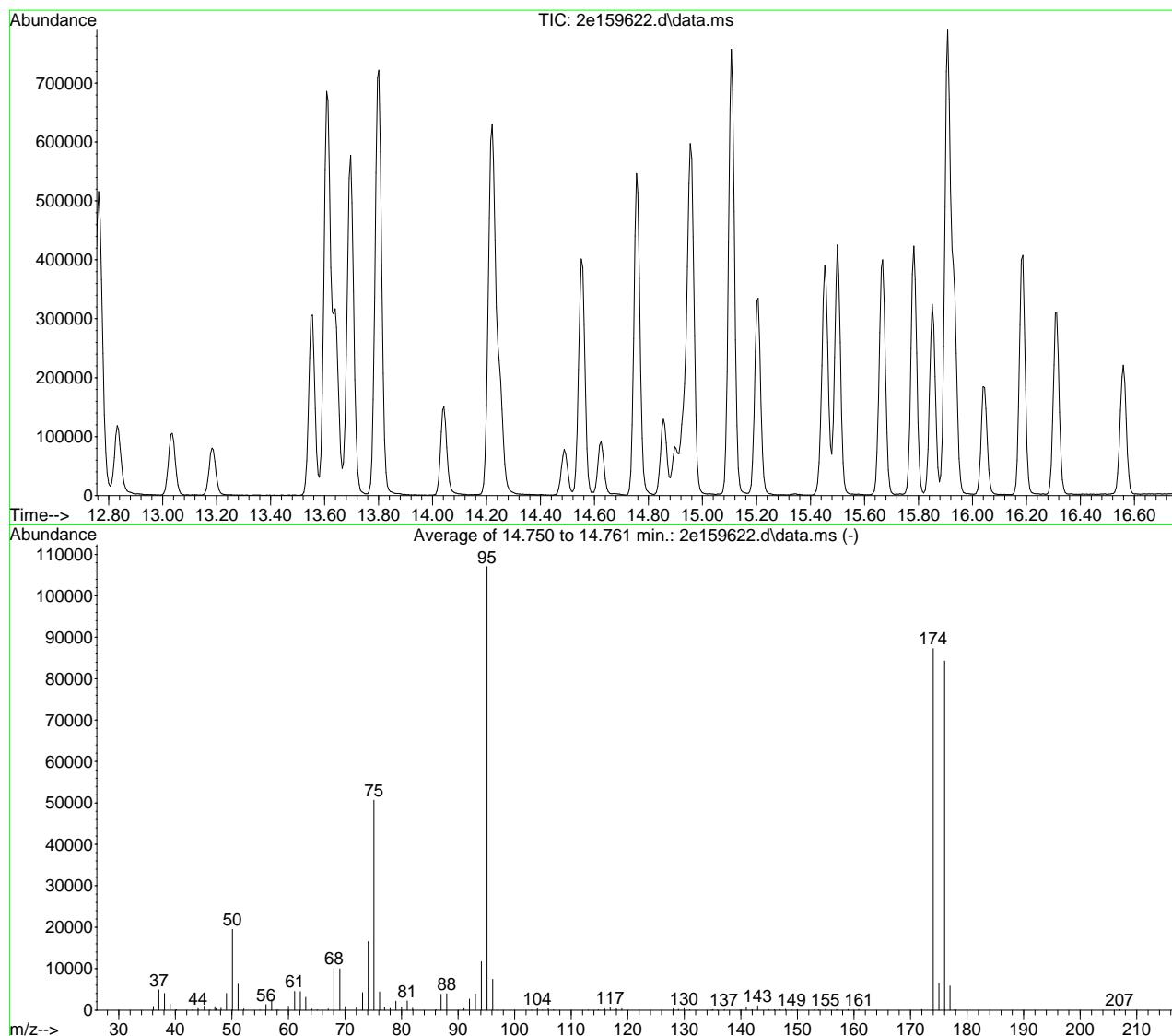
Average of 14.750 to 14.760 min.: 2e159597.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
174.00	85208						
175.00	6703						
176.00	82576						
177.00	5368						
177.90	162						
206.95	51						

SW-846 Method 8260
 Data File : C:\msdchem\1\data\da...20\v2e8004\2e159622.d Vial: 2
 Acq On : 19 Feb 2020 7:16 am Operator: edwardd
 Sample : BFB Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p
 Method : C:\MSDCHEM\1\METHODS\M2E6949.M (RTE Integrator)
 Title : SW-846 Method V8260C / EPA 624 , ZB624 60MX0.25MMx1.4UM



AutoFind: Scans 2091, 2092, 2093; Background Corrected with Scan 2082

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	19477	PASS
75	95	30	60	47.4	50689	PASS
95	95	100	100	100.0	107029	PASS
96	95	5	9	7.0	7476	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	81.5	87256	PASS
175	174	5	9	7.4	6463	PASS
176	174	95	101	96.6	84264	PASS
177	176	5	9	6.9	5816	PASS

Average of 14.750 to 14.761 min.: 2e159622.d\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	909	48.10	503	61.10	4515	74.10	16584
37.10	4895	49.05	4032	62.10	4486	75.10	50689
38.10	4051	50.10	19477	63.05	3103	76.10	4419
39.10	1518	51.10	6294	64.10	303	77.00	721
40.20	74	52.10	283	65.05	127	78.00	405
43.05	105	55.00	41	67.05	314	79.00	2163
44.00	399	56.05	1370	68.05	10056	80.00	750
45.10	951	57.05	2543	69.10	9920	81.00	2242
46.10	23	57.90	46	70.05	823	81.95	485
47.00	816	58.20	31	72.00	538	86.05	107
47.20	352	60.00	964	73.10	4238	87.00	3831

Average of 14.750 to 14.761 min.: 2e159622.d\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.00	3934	105.95	350	130.95	117	145.95	109
91.05	327	106.90	90	134.80	50	146.95	124
92.00	2644	113.00	49	135.05	162	147.90	225
93.05	3929	114.80	85	135.80	26	149.00	35
94.10	11707	115.95	293	137.05	169	149.95	138
95.10	107029	116.90	623	139.80	33	152.90	62
96.10	7476	118.00	374	140.10	34	153.80	74
97.05	191	118.95	378	140.95	767	154.95	245
103.00	28	128.05	329	141.95	133	156.95	159
104.00	354	128.95	225	142.95	1036	158.95	130
104.95	18	129.95	398	144.95	103	160.85	152

Average of 14.750 to 14.761 min.: 2e159622.d\data.ms

BFB

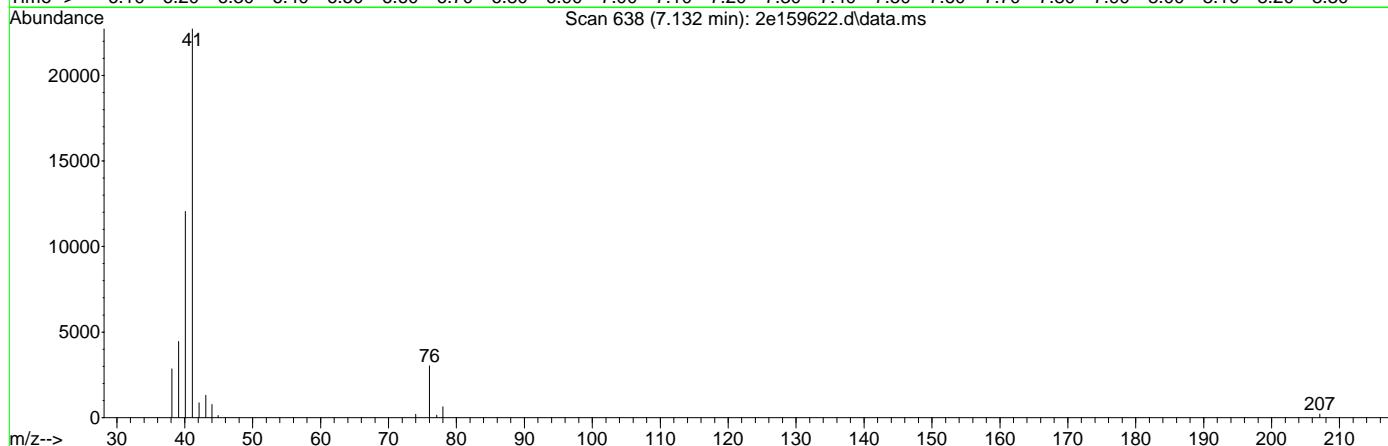
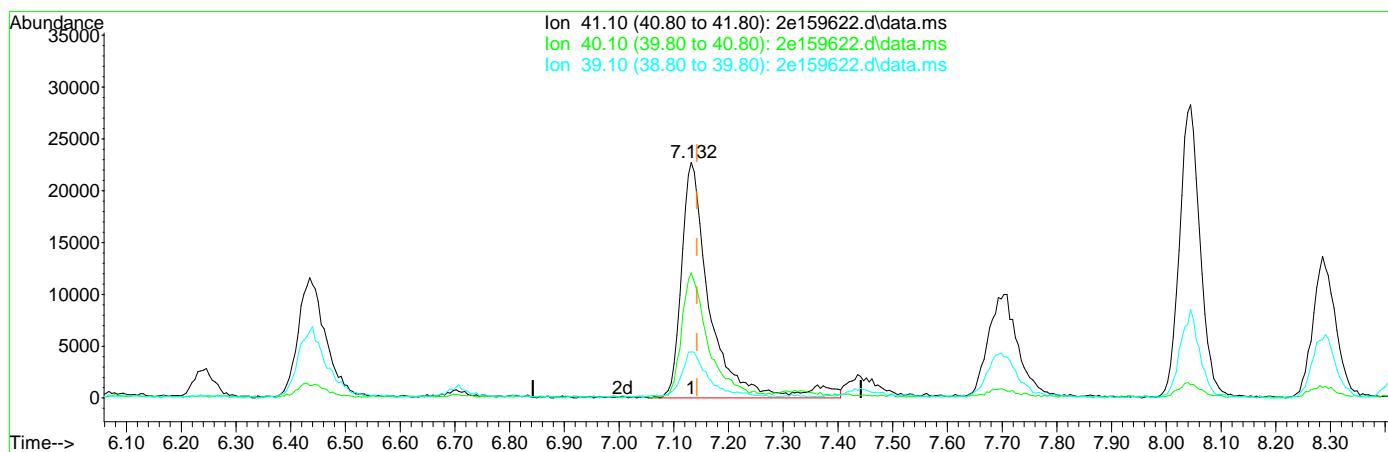
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.95	144						
174.00	87256						
175.00	6463						
176.00	84264						
177.00	5816						
177.80	92						
178.00	32						
207.00	72						

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:24:39 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159622.d\data.ms

(21) acetonitrile
 7.132min (-0.010) 206.29ug/L

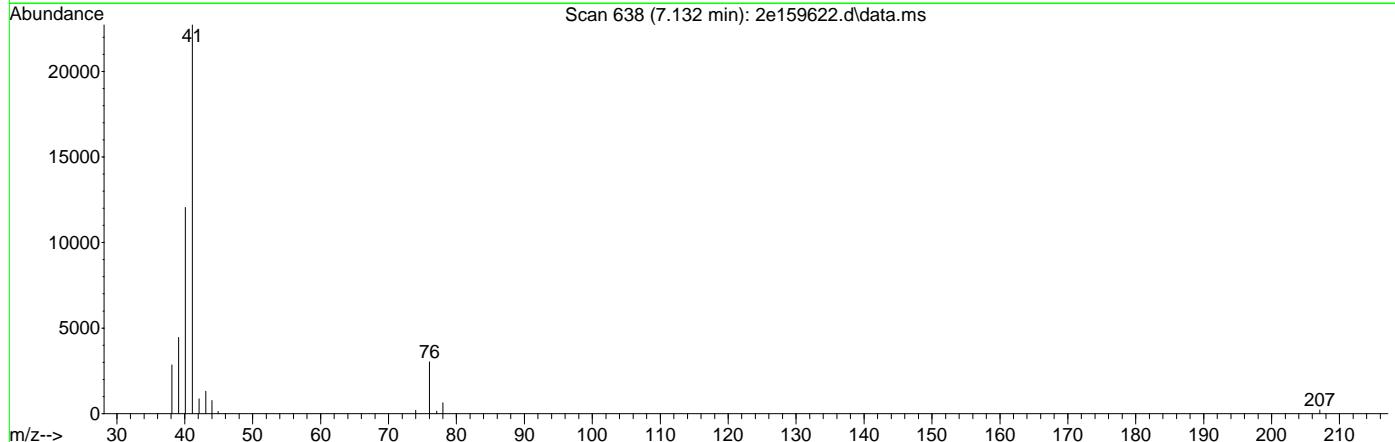
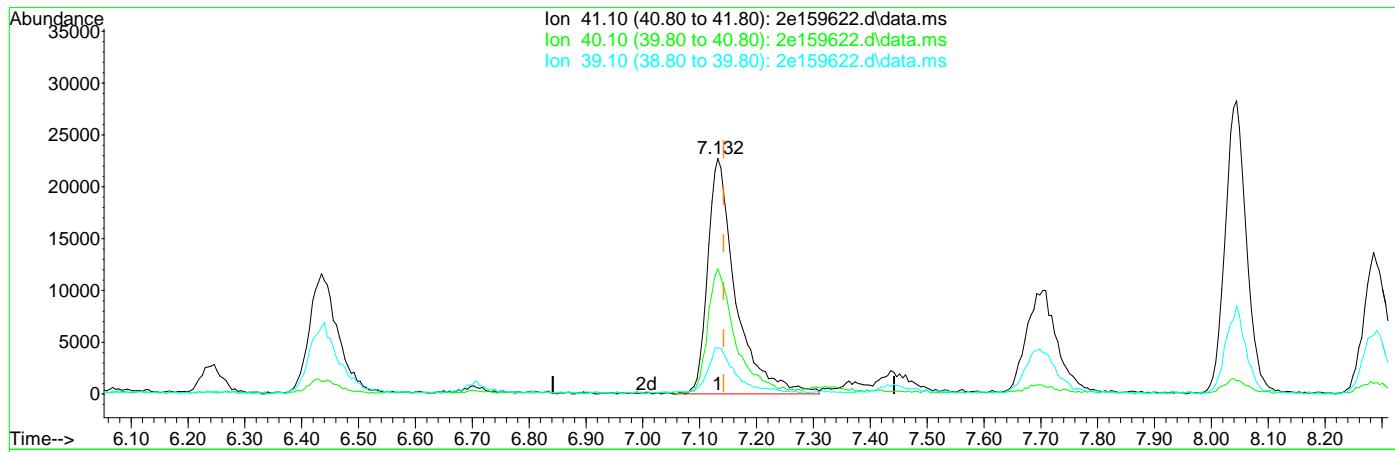
response 82544

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.07
39.10	19.60	18.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 2 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:24:39 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159622.d\data.ms

(21) acetonitrile

7.132min (-0.010) 195.04ug/L m

response 78041

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.07
39.10	19.60	19.57
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156548.D
 Acq On : 9 Oct 2019 3:27 pm
 Operator : roberts
 Sample : ic6949-0.2
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:14:52 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.331	65	120996	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	292319	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	447138	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	356700	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	175585	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	126004	48.40	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.80%		
55) 1,2-dichloroethane-d4 (s)	10.037	65	132897	49.49	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	98.98%		
76) toluene-d8 (s)	12.118	98	500879	50.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.84%		
99) 4-bromofluorobenzene (s)	14.766	95	173122	50.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.26%		
<hr/>						
Target Compounds				Qvalue		
9) vinyl chloride	4.615	62	1070	0.20	ug/L	93
14) vinyl bromide	5.748	106	521	0.21	ug/L	94
19) 1,1-dichloroethene	6.665	61	892	0.20	ug/L	99
23) carbon disulfide	7.074	76	1717	0.21	ug/L	84
26) methyl tert butyl ether	7.714	73	2027	0.24	ug/L	95
29) di-isopropyl ether	8.296	45	2424	0.21	ug/L #	43
30) ethyl tert-butyl ether	8.762	59	1881	0.19	ug/L	89
32) 1,1-dichloroethane	8.312	63	1040	0.19	ug/L	86
33) chloroprene	8.432	53	939	0.20	ug/L	84
46) carbon tetrachloride	9.879	117	807	0.20	ug/L	84
50) 1,1,1-trichloroethane	9.670	97	971	0.21	ug/L	86
58) benzene	10.110	78	3083	0.25	ug/L	91
59) tert-amyl methyl ether	10.147	73	2388	0.25	ug/L	88
63) trichloroethene	10.833	95	754	0.26	ug/L	92
67) 1,2-dichloropropane	11.090	63	679	0.21	ug/L	88
70) bromodichloromethane	11.384	83	767	0.20	ug/L	83
72) cis-1,3-dichloropropene	11.835	75	980	0.19	ug/L #	65
77) toluene	12.197	92	1586	0.22	ug/L #	83
78) ethyl methacrylate	12.396	69	662	0.19	ug/L	72
79) trans-1,3-dichloropropene	12.401	75	798	0.19	ug/L	99
80) 1,1,2-trichloroethane	12.606	83	400	0.20	ug/L #	87
81) tetrachloroethene	12.768	164	415	0.18	ug/L	86
82) 2-hexanone	12.794	58	599	0.59	ug/L #	92
83) 1,3-dichloropropane	12.789	76	899	0.21	ug/L	87
85) dibromochloromethane	13.051	129	466	0.17	ug/L	70
86) 1,2-dibromoethane	13.203	107	441	0.16	ug/L	92
87) n-butyl ether	13.565	57	2374	0.18	ug/L	97
88) chlorobenzene	13.649	112	1580	0.21	ug/L	83
89) 1,1,1,2-tetrachloroethane	13.712	131	530	0.19	ug/L #	73
90) ethylbenzene	13.707	91	2763	0.21	ug/L	88
91) m,p-xylene	13.817	106	2167	0.42	ug/L #	70
92) o-xylene	14.226	91	2223	0.21	ug/L	91
93) styrene	14.236	104	1525	0.18	ug/L	98
94) butyl acrylate	14.074	55	761	0.14	ug/L	89
96) isopropylbenzene	14.567	105	2819	0.21	ug/L	98
100) bromobenzene	14.965	156	656	0.21	ug/L #	67
101) 1,1,2,2-tetrachloroethane	14.871	83	560	0.18	ug/L	69
104) n-propylbenzene	14.975	91	3212	0.21	ug/L	88
105) 2-chlorotoluene	15.122	126	731	0.24	ug/L #	69
106) 4-chlorotoluene	15.217	91	1925	0.22	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156548.D
 Acq On : 9 Oct 2019 3:27 pm
 Operator : roberts
 Sample : ic6949-0.2
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:14:52 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

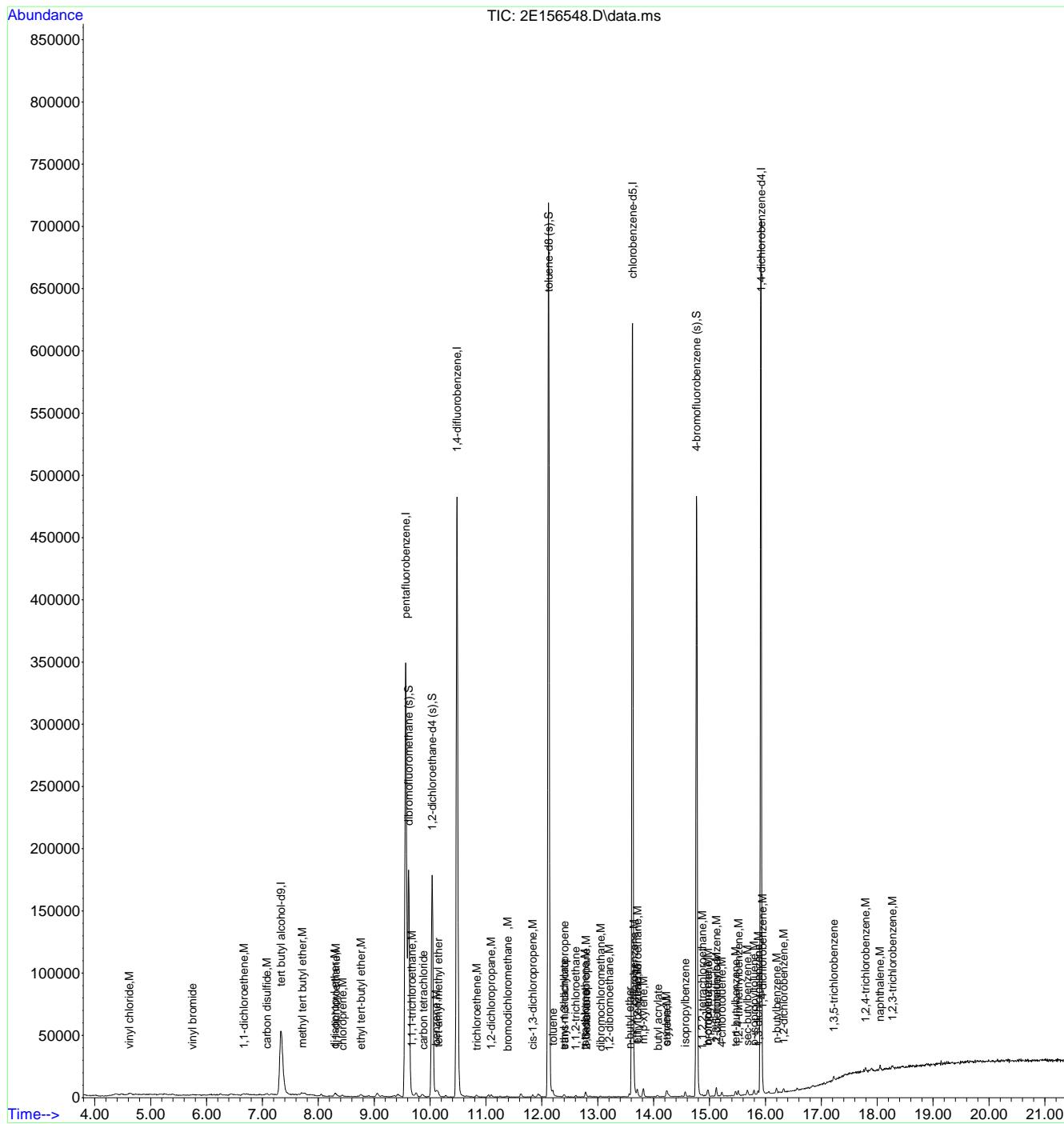
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	15.122	105	2314	0.21	ug/L	89
108) tert-butylbenzene	15.463	119	1818	0.19	ug/L	95
109) 1,2,4-trimethylbenzene	15.516	105	2178	0.20	ug/L	99
110) sec-butylbenzene	15.678	105	2798	0.20	ug/L	88
111) 1,3-dichlorobenzene	15.872	146	1330	0.23	ug/L	83
112) p-isopropyltoluene	15.793	119	2502	0.21	ug/L	95
113) 1,4-dichlorobenzene	15.945	146	1305	0.22	ug/L	79
114) 1,2-dichlorobenzene	16.323	146	1337	0.23	ug/L	88
115) n-butylbenzene	16.197	92	1175	0.19	ug/L	96
117) 1,3,5-trichlorobenzene	17.220	180	1046	0.21	ug/L	86
118) 1,2,4-trichlorobenzene	17.791	180	950	0.22	ug/L	95
121) naphthalene	18.048	128	1991	0.20	ug/L	87
122) 1,2,3-trichlorobenzene	18.273	180	905	0.23	ug/L	76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156548.D
 Acq On : 9 Oct 2019 3:27 pm
 Operator : roberts
 Sample : ic6949-0.2
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:14:52 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156549.D
 Acq On : 9 Oct 2019 3:58 pm
 Operator : roberts
 Sample : ic6949-0.5
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 14:17:27 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.342	65	124945	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	290915	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	443931	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	358916	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	179950	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	124766	48.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.30%		
55) 1,2-dichloroethane-d4 (s)	10.036	65	133922	50.23	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	100.46%		
76) toluene-d8 (s)	12.118	98	500833	50.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.20%		
99) 4-bromofluorobenzene (s)	14.766	95	176410	50.34	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.68%		
<hr/>						
Target Compounds						
				Qvalue		
6) chlorodifluoromethane	4.017	51	2477	0.50	ug/L	93
8) chloromethane	4.390	50	2780	0.54	ug/L	93
9) vinyl chloride	4.626	62	2445	0.47	ug/L	88
11) chloroethane	5.396	64	1347	0.51	ug/L	85
12) trichlorofluoromethane	5.858	101	1661	0.37	ug/L	91
13) 1,3-butadiene	4.647	54	1643	0.46	ug/L	92
14) vinyl bromide	5.748	106	1157	0.47	ug/L	96
15) ethyl ether	6.256	74	969	0.55	ug/L #	83
19) 1,1-dichloroethene	6.670	61	2297	0.51	ug/L	78
22) iodomethane	6.959	142	1789	0.50	ug/L	94
23) carbon disulfide	7.085	76	4060	0.51	ug/L	95
26) methyl tert butyl ether	7.730	73	4611	0.54	ug/L	97
27) trans-1,2-dichloroethene	7.761	61	2109	0.50	ug/L	85
28) hexane	8.065	56	880	0.36	ug/L #	85
29) di-isopropyl ether	8.296	45	5719	0.51	ug/L #	45
30) ethyl tert-butyl ether	8.773	59	4962	0.50	ug/L	97
32) 1,1-dichloroethane	8.322	63	2949	0.53	ug/L	93
33) chloroprene	8.437	53	2301	0.50	ug/L	87
34) acrylonitrile	7.714	53	535	0.49	ug/L	84
37) 2,2-dichloropropane	9.066	77	2693	0.58	ug/L	87
38) cis-1,2-dichloroethene	9.046	96	1813	0.55	ug/L #	69
39) propionitrile	9.145	54	1772	4.29	ug/L	69
41) bromochloromethane	9.376	128	800	0.52	ug/L #	69
43) chloroform	9.418	83	2870	0.57	ug/L	93
44) t-butyl formate	9.460	59	1498	0.49	ug/L #	68
45) 1,1-dichloropropene	9.853	75	2213	0.53	ug/L	89
46) carbon tetrachloride	9.874	117	1976	0.50	ug/L	87
50) 1,1,1-trichloroethane	9.675	97	2333	0.51	ug/L	95
58) benzene	10.115	78	6716	0.55	ug/L	93
59) tert-amyl methyl ether	10.147	73	5317	0.56	ug/L	94
63) trichloroethene	10.828	95	1409	0.48	ug/L	92
65) 2-chloroethyl vinyl ether	11.625	63	4031	2.17	ug/L	94
67) 1,2-dichloropropane	11.090	63	1592	0.49	ug/L	89
69) dibromomethane	11.248	93	829	0.49	ug/L	87
70) bromodichloromethane	11.379	83	1845	0.48	ug/L	85
72) cis-1,3-dichloropropene	11.840	75	2312	0.45	ug/L	95
73) 4-methyl-2-pentanone	11.929	58	1918	1.74	ug/L	88
77) toluene	12.197	92	3956	0.54	ug/L #	81
78) ethyl methacrylate	12.391	69	1443	0.40	ug/L	85
79) trans-1,3-dichloropropene	12.391	75	1868	0.44	ug/L	67

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156549.D
 Acq On : 9 Oct 2019 3:58 pm
 Operator : roberts
 Sample : ic6949-0.5
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 14:17:27 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

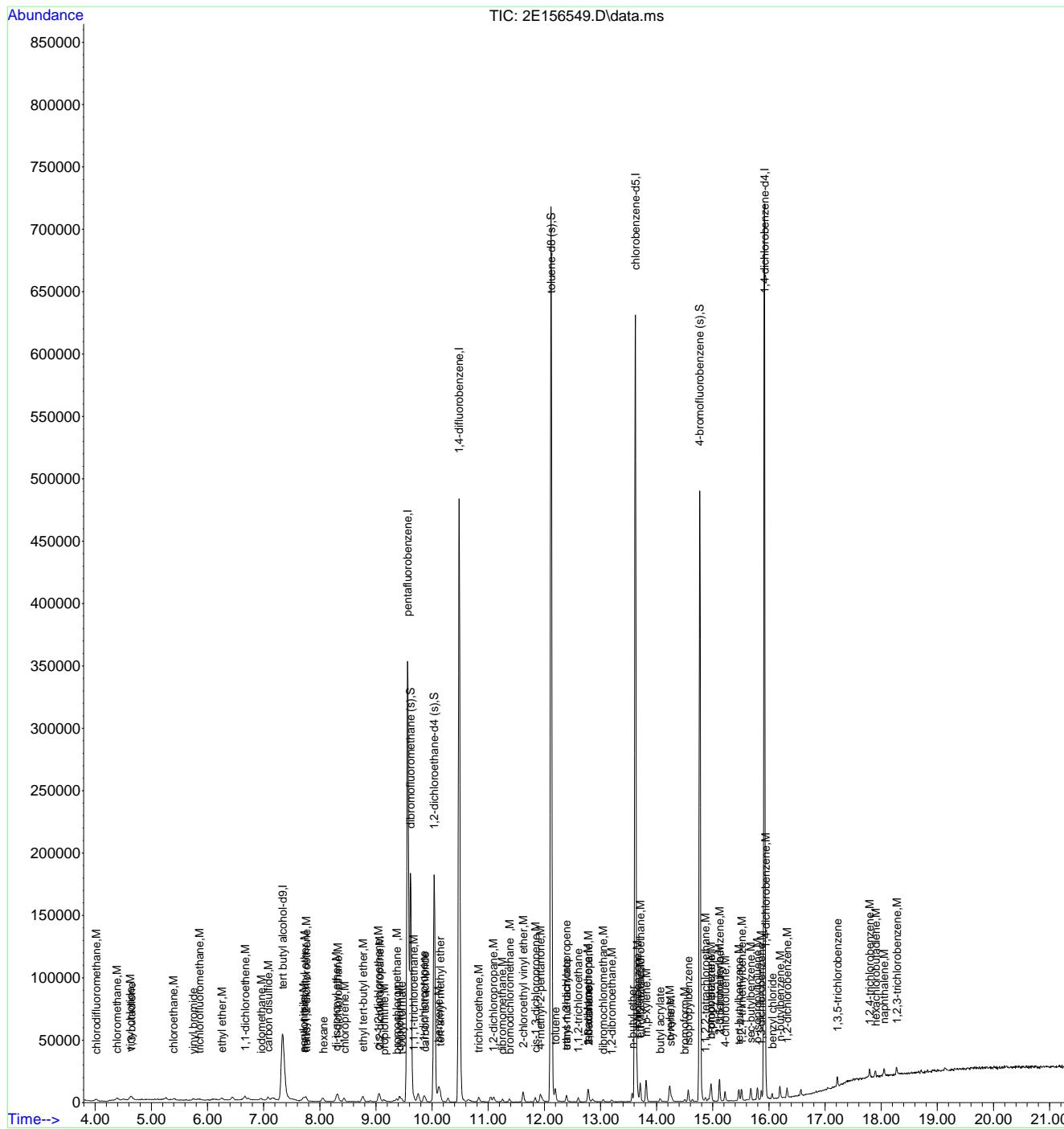
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) 1,1,2-trichloroethane	12.606	83	1062	0.52	ug/L #	81
81) tetrachloroethene	12.779	164	1251	0.54	ug/L	90
82) 2-hexanone	12.789	58	1517	1.49	ug/L #	85
83) 1,3-dichloropropane	12.784	76	2115	0.50	ug/L	83
85) dibromochloromethane	13.046	129	1425	0.52	ug/L	82
86) 1,2-dibromoethane	13.198	107	1268	0.47	ug/L	90
87) n-butyl ether	13.565	57	6358	0.48	ug/L	97
88) chlorobenzene	13.654	112	3958	0.52	ug/L	98
89) 1,1,1,2-tetrachloroethane	13.712	131	1314	0.47	ug/L	86
90) ethylbenzene	13.707	91	6949	0.52	ug/L	96
91) m,p-xylene	13.817	106	5133	0.98	ug/L	91
92) o-xylene	14.231	91	5521	0.51	ug/L	94
93) styrene	14.247	104	3682	0.43	ug/L	97
94) butyl acrylate	14.063	55	2255	0.40	ug/L	89
95) bromoform	14.498	173	707	0.42	ug/L	91
96) isopropylbenzene	14.566	105	6421	0.48	ug/L	94
100) bromobenzene	14.965	156	1514	0.48	ug/L	90
101) 1,1,2,2-tetrachloroethane	14.871	83	1428	0.46	ug/L	79
104) n-propylbenzene	14.970	91	7795	0.51	ug/L	92
105) 2-chlorotoluene	15.117	126	1650	0.53	ug/L #	78
106) 4-chlorotoluene	15.222	91	4856	0.53	ug/L	95
107) 1,3,5-trimethylbenzene	15.122	105	5587	0.51	ug/L	90
108) tert-butylbenzene	15.463	119	4705	0.49	ug/L	95
109) 1,2,4-trimethylbenzene	15.515	105	5622	0.51	ug/L	90
110) sec-butylbenzene	15.678	105	7217	0.50	ug/L	94
111) 1,3-dichlorobenzene	15.861	146	2999	0.50	ug/L	93
112) p-isopropyltoluene	15.793	119	5794	0.48	ug/L	96
113) 1,4-dichlorobenzene	15.940	146	3081	0.51	ug/L	80
114) 1,2-dichlorobenzene	16.323	146	3138	0.53	ug/L	95
115) n-butylbenzene	16.197	92	3043	0.49	ug/L	91
117) 1,3,5-trichlorobenzene	17.219	180	2413	0.48	ug/L	95
118) 1,2,4-trichlorobenzene	17.796	180	2220	0.50	ug/L	85
120) hexachlorobutadiene	17.901	225	986	0.46	ug/L	91
121) naphthalene	18.053	128	4633	0.45	ug/L	98
122) 1,2,3-trichlorobenzene	18.279	180	2066	0.50	ug/L	93
124) benzyl chloride	16.061	91	3295	0.50	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156549.D
 Acq On : 9 Oct 2019 3:58 pm
 Operator : roberts
 Sample : ic6949-0.5
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 10 14:17:27 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156550.D
 Acq On : 9 Oct 2019 4:29 pm
 Operator : roberts
 Sample : ic6949-1
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 14:35:36 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 14:33:26 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	118633	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	266713	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	416385	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	343722	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	169935	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	118668	50.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.56%			
55) 1,2-dichloroethane-d4 (s)	10.037	65	128560	51.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.62%			
76) toluene-d8 (s)	12.118	98	473927	49.92	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.84%			
99) 4-bromofluorobenzene (s)	14.766	95	167069	50.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.84%			
<hr/>						
Target Compounds				Qvalue		
2) ethanol	6.078	45	3807	117.95	ug/L	81
3) tertiary butyl alcohol	7.452	59	1561	4.93	ug/L	85
6) chlorodifluoromethane	4.018	51	4975	1.11	ug/L	94
7) dichlorodifluoromethane	3.997	85	2975	0.88	ug/L	85
8) chloromethane	4.385	50	5241	1.12	ug/L	94
9) vinyl chloride	4.610	62	4672	1.01	ug/L	89
10) bromomethane	5.265	94	2997	1.11	ug/L	83
11) chloroethane	5.402	64	2591	1.09	ug/L	99
12) trichlorofluoromethane	5.853	101	3816	0.99	ug/L	93
13) 1,3-butadiene	4.641	54	3240	1.04	ug/L	94
14) vinyl bromide	5.742	106	2208	0.99	ug/L	90
15) ethyl ether	6.251	74	1746	1.05	ug/L #	81
16) 2-chloropropane	6.440	43	6116	1.17	ug/L	88
18) freon 113	6.650	151	1766	0.88	ug/L	93
19) 1,1-dichloroethene	6.671	61	4221	1.03	ug/L	98
20) acetone	6.723	43	4367	5.62	ug/L	89
22) iodomethane	6.943	142	3479	1.05	ug/L	97
23) carbon disulfide	7.079	76	7744	1.05	ug/L	88
24) methylene chloride	7.373	84	3592	1.22	ug/L	87
26) methyl tert butyl ether	7.719	73	8343	1.05	ug/L	93
27) trans-1,2-dichloroethene	7.756	61	4077	1.07	ug/L	97
28) hexane	8.065	56	2137	1.02	ug/L #	48
29) di-isopropyl ether	8.301	45	11313	1.10	ug/L #	74
30) ethyl tert-butyl ether	8.768	59	9608	1.07	ug/L	96
31) 2-butanone	9.030	72	868	3.19	ug/L #	65
32) 1,1-dichloroethane	8.322	63	5393	1.06	ug/L	98
33) chloroprene	8.427	53	4328	1.04	ug/L	93
34) acrylonitrile	7.709	53	1025	1.03	ug/L	70
35) vinyl acetate	8.317	86	426	0.73	ug/L #	1
36) ethyl acetate	9.067	45	473	1.08	ug/L #	74
37) 2,2-dichloropropane	9.056	77	5150	1.17	ug/L	82
38) cis-1,2-dichloroethene	9.056	96	3547	1.14	ug/L	88
39) propionitrile	9.130	54	3665	10.22	ug/L	76
41) bromochloromethane	9.365	128	1436	1.01	ug/L #	69
43) chloroform	9.418	83	5089	1.07	ug/L	92
44) t-butyl formate	9.455	59	3062	1.11	ug/L	77
45) 1,1-dichloropropene	9.858	75	3932	1.03	ug/L	97
46) carbon tetrachloride	9.874	117	3737	1.03	ug/L	93
49) methacrylonitrile	9.323	67	876	0.88	ug/L	88
50) 1,1,1-trichloroethane	9.675	97	4450	1.05	ug/L	84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156550.D
 Acq On : 9 Oct 2019 4:29 pm
 Operator : roberts
 Sample : ic6949-1
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 14:35:36 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 14:33:26 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
51) cyclohexane	9.743	84	3998	0.92	ug/L	# 90
56) 2,2,4-trimethylpentane	10.099	57	8356	0.94	ug/L	86
57) n-butyl alcohol	10.640	56	3474	48.17	ug/L	88
58) benzene	10.110	78	12743	1.07	ug/L	95
59) tert-amyl methyl ether	10.147	73	9491	1.03	ug/L	99
60) heptane	10.283	57	1746	0.86	ug/L	85
61) 1,2-dichloroethane	10.126	62	4167	1.19	ug/L	91
62) ethyl acrylate	10.854	55	2889	0.92	ug/L	86
63) trichloroethene	10.828	95	2565	0.93	ug/L	78
65) 2-chloroethyl vinyl ether	11.615	63	8319	5.03	ug/L	98
67) 1,2-dichloropropane	11.090	63	3359	1.11	ug/L	82
68) methylcyclohexane	11.043	83	4677	0.95	ug/L	92
69) dibromomethane	11.253	93	1743	1.10	ug/L	90
70) bromodichloromethane	11.379	83	3697	1.05	ug/L	92
71) epichlorohydrin	11.751	57	1235	4.93	ug/L	# 57
72) cis-1,3-dichloropropene	11.840	75	4665	1.01	ug/L	96
73) 4-methyl-2-pentanone	11.924	58	3698	3.82	ug/L	93
77) toluene	12.191	92	7082	1.01	ug/L	93
78) ethyl methacrylate	12.385	69	2974	0.95	ug/L	89
79) trans-1,3-dichloropropene	12.396	75	3712	0.96	ug/L	92
80) 1,1,2-trichloroethane	12.600	83	1864	0.96	ug/L	93
81) tetrachloroethene	12.773	164	2432	1.10	ug/L	93
82) 2-hexanone	12.779	58	3168	3.70	ug/L	# 85
83) 1,3-dichloropropane	12.784	76	4313	1.05	ug/L	94
84) butyl acetate	12.857	56	1825	1.04	ug/L	92
85) dibromochloromethane	13.046	129	2456	0.98	ug/L	98
86) 1,2-dibromoethane	13.198	107	2618	1.05	ug/L	86
87) n-butyl ether	13.565	57	12868	1.05	ug/L	95
88) chlorobenzene	13.654	112	7250	0.99	ug/L	96
89) 1,1,1,2-tetrachloroethane	13.712	131	2618	1.00	ug/L	84
90) ethylbenzene	13.707	91	12664	0.99	ug/L	95
91) m,p-xylene	13.812	106	9822	1.99	ug/L	99
92) o-xylene	14.226	91	10525	1.02	ug/L	96
93) styrene	14.241	104	7343	0.96	ug/L	95
94) butyl acrylate	14.058	55	4515	0.96	ug/L	90
95) bromoform	14.498	173	1343	0.88	ug/L	84
96) isopropylbenzene	14.567	105	12606	1.00	ug/L	96
100) bromobenzene	14.965	156	3103	1.04	ug/L	84
101) 1,1,2,2-tetrachloroethane	14.871	83	3217	1.12	ug/L	95
103) 1,2,3-trichloropropane	14.949	110	879	1.05	ug/L	95
104) n-propylbenzene	14.970	91	14937	1.03	ug/L	99
105) 2-chlorotoluene	15.122	126	2930	0.98	ug/L	92
106) 4-chlorotoluene	15.217	91	9255	1.06	ug/L	92
107) 1,3,5-trimethylbenzene	15.122	105	10450	1.01	ug/L	96
108) tert-butylbenzene	15.463	119	9287	1.05	ug/L	93
109) 1,2,4-trimethylbenzene	15.516	105	10274	1.00	ug/L	94
110) sec-butylbenzene	15.678	105	13563	1.03	ug/L	99
111) 1,3-dichlorobenzene	15.867	146	5720	1.00	ug/L	97
112) p-isopropyltoluene	15.793	119	11337	1.01	ug/L	98
113) 1,4-dichlorobenzene	15.945	146	5800	1.00	ug/L	91
114) 1,2-dichlorobenzene	16.323	146	5716	1.01	ug/L	94
115) n-butylbenzene	16.197	92	5861	1.03	ug/L	91
116) 1,2-dibromo-3-chloropr...	17.052	157	672	1.04	ug/L	85
117) 1,3,5-trichlorobenzene	17.220	180	4666	1.00	ug/L	98
118) 1,2,4-trichlorobenzene	17.796	180	3924	0.95	ug/L	96
120) hexachlorobutadiene	17.896	225	1927	0.98	ug/L	95
121) naphthalene	18.053	128	9061	0.98	ug/L	99
122) 1,2,3-trichlorobenzene	18.279	180	3784	0.99	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156550.D
Acq On : 9 Oct 2019 4:29 pm
Operator : roberts
Sample : ic6949-1
Misc : MS37796,V2E6949,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 14:35:36 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 14:33:26 2019

Response via : Initial Calibration

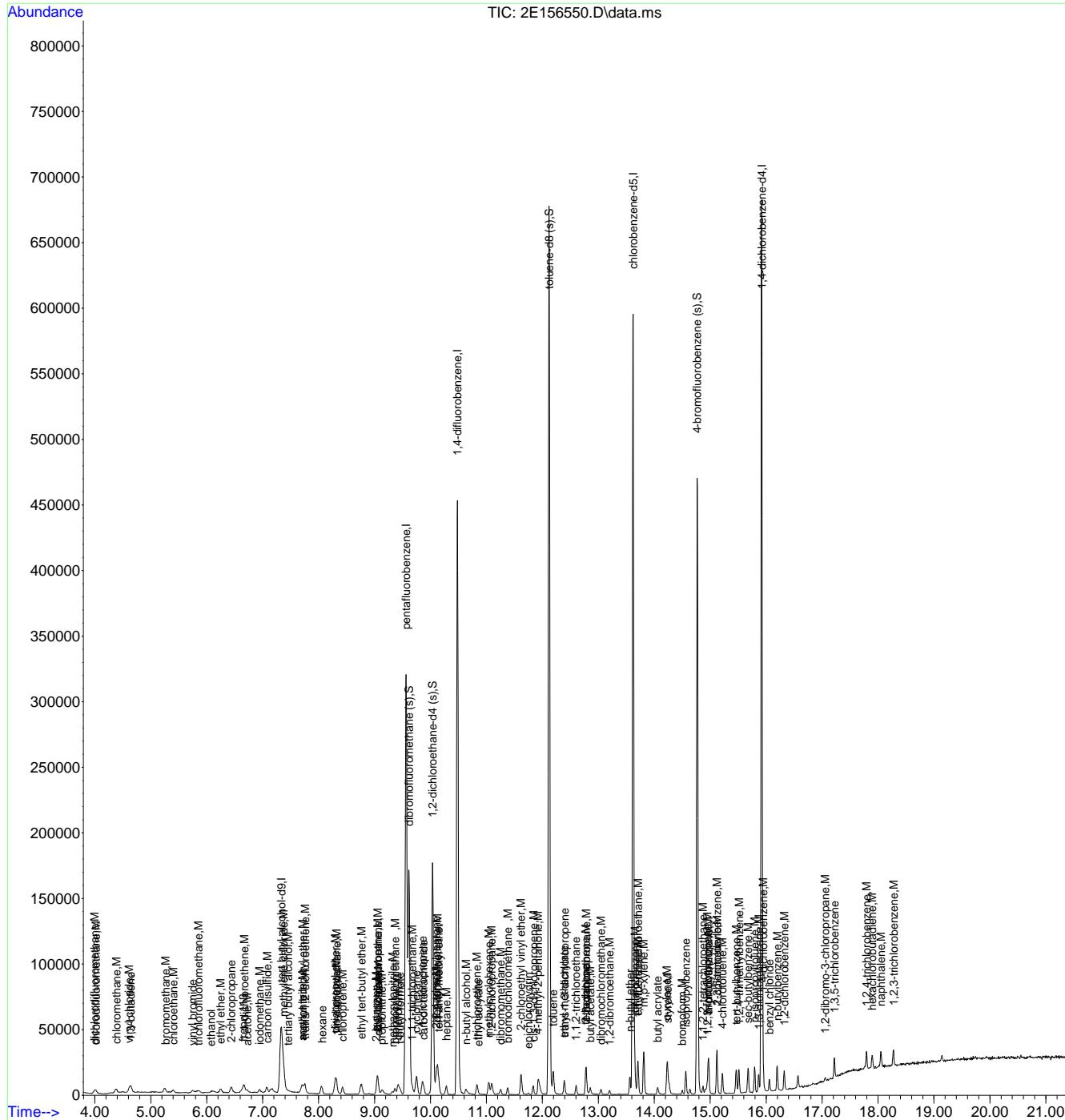
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
124) benzyl chloride	16.056	91	6534	1.08	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949
Data File : 2E156550.D
Acq On : 9 Oct 2019 4:29 pm
Operator : roberts
Sample : ic6949-1
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 10 14:35:36 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 14:33:26 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156551.D
 Acq On : 9 Oct 2019 4:59 pm
 Operator : roberts
 Sample : ic6949-2
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 14:24:24 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	122311	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	289736	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	446740	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	365669	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	185498	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	129456	50.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.32%		
55) 1,2-dichloroethane-d4 (s)	10.037	65	137158	51.12	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	102.24%		
76) toluene-d8 (s)	12.118	98	505962	50.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.36%		
99) 4-bromofluorobenzene (s)	14.766	95	179005	49.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.10%		
<hr/>						
Target Compounds				Qvalue		
2) ethanol	6.094	45	6846	208.53	ug/L	91
3) tertiary butyl alcohol	7.468	59	3231	9.43	ug/L	86
4) 1,4-dioxane	11.211	88	1417	50.66	ug/L	# 65
6) chlorodifluoromethane	4.023	51	9576	1.94	ug/L	96
7) dichlorodifluoromethane	3.991	85	7447	1.89	ug/L	96
8) chloromethane	4.395	50	10398	2.04	ug/L	97
9) vinyl chloride	4.626	62	9998	1.91	ug/L	97
10) bromomethane	5.255	94	6190	2.12	ug/L	95
11) chloroethane	5.407	64	5204	2.00	ug/L	95
12) trichlorofluoromethane	5.858	101	8710	1.95	ug/L	88
13) 1,3-butadiene	4.647	54	6558	1.85	ug/L	89
14) vinyl bromide	5.753	106	5105	2.08	ug/L	90
15) ethyl ether	6.246	74	3758	2.12	ug/L	97
16) 2-chloropropane	6.445	43	12445	2.23	ug/L	92
18) freon 113	6.650	151	4214	1.90	ug/L	# 77
19) 1,1-dichloroethene	6.671	61	8729	1.93	ug/L	98
20) acetone	6.723	43	6764	8.66	ug/L	94
22) iodomethane	6.948	142	7130	1.98	ug/L	98
23) carbon disulfide	7.080	76	15442	1.94	ug/L	96
24) methylene chloride	7.384	84	6610	2.20	ug/L	91
25) methyl acetate	7.179	43	4305	2.01	ug/L	88
26) methyl tert butyl ether	7.714	73	16667	1.98	ug/L	95
27) trans-1,2-dichloroethene	7.761	61	8111	1.94	ug/L	94
28) hexane	8.060	56	4548	1.89	ug/L	# 83
29) di-isopropyl ether	8.296	45	20727	1.84	ug/L	# 62
30) ethyl tert-butyl ether	8.768	59	19000	1.92	ug/L	90
31) 2-butanone	9.040	72	2082	6.43	ug/L	# 58
32) 1,1-dichloroethane	8.317	63	11150	2.00	ug/L	96
33) chloroprene	8.427	53	9046	1.96	ug/L	96
34) acrylonitrile	7.714	53	2266	2.07	ug/L	82
35) vinyl acetate	8.317	86	1181	1.73	ug/L	# 40
36) ethyl acetate	9.056	45	1043	2.28	ug/L	# 62
37) 2,2-dichloropropane	9.056	77	9850	2.13	ug/L	97
38) cis-1,2-dichloroethene	9.056	96	6645	2.02	ug/L	88
39) propionitrile	9.135	54	7496	18.20	ug/L	89
41) bromochloromethane	9.371	128	3008	1.98	ug/L	96
42) tetrahydrofuran	9.418	72	887	2.37	ug/L	# 37
43) chloroform	9.423	83	10266	2.05	ug/L	93
44) t-butyl formate	9.444	59	5660	1.86	ug/L	83
45) 1,1-dichloropropene	9.853	75	8076	1.93	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156551.D
 Acq On : 9 Oct 2019 4:59 pm
 Operator : roberts
 Sample : ic6949-2
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 14:24:24 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) carbon tetrachloride	9.869	117	7638	1.93	ug/L	91
47) isopropyl acetate	10.031	87	1235	1.80	ug/L #	50
49) methacrylonitrile	9.318	67	2055	1.77	ug/L	97
50) 1,1,1-trichloroethane	9.675	97	8900	1.95	ug/L	99
51) cyclohexane	9.748	84	9659	1.96	ug/L	95
56) 2,2,4-trimethylpentane	10.105	57	18155	1.81	ug/L	98
57) n-butyl alcohol	10.629	56	7429	87.15	ug/L	100
58) benzene	10.115	78	24802	2.03	ug/L	99
59) tert-amyl methyl ether	10.141	73	19157	2.00	ug/L	96
60) heptane	10.283	57	4124	1.76	ug/L	92
61) 1,2-dichloroethane	10.131	62	7788	2.13	ug/L	95
62) ethyl acrylate	10.844	55	6359	1.77	ug/L	95
63) trichloroethene	10.834	95	5822	1.98	ug/L	90
65) 2-chloroethyl vinyl ether	11.615	63	16970	9.06	ug/L	99
66) methyl methacrylate	11.111	100	1344	1.78	ug/L #	39
67) 1,2-dichloropropane	11.090	63	6086	1.87	ug/L	97
68) methylcyclohexane	11.049	83	9933	1.79	ug/L	92
69) dibromomethane	11.253	93	3334	1.95	ug/L	96
70) bromodichloromethane	11.379	83	7192	1.86	ug/L	95
71) epichlorohydrin	11.751	57	2635	9.39	ug/L	91
72) cis-1,3-dichloropropene	11.830	75	9763	1.90	ug/L	95
73) 4-methyl-2-pentanone	11.924	58	7805	7.04	ug/L	99
74) 3-methyl-1-butanol	11.956	70	2995	33.72	ug/L #	76
77) toluene	12.197	92	14059	1.90	ug/L	98
78) ethyl methacrylate	12.385	69	6077	1.67	ug/L	97
79) trans-1,3-dichloropropene	12.391	75	7872	1.81	ug/L	95
80) 1,1,2-trichloroethane	12.600	83	4232	2.03	ug/L	93
81) tetrachloroethene	12.779	164	4552	1.92	ug/L	99
82) 2-hexanone	12.779	58	7013	6.77	ug/L	96
83) 1,3-dichloropropane	12.779	76	8624	1.98	ug/L	89
84) butyl acetate	12.852	56	3275	1.67	ug/L	89
85) dibromochloromethane	13.046	129	4924	1.77	ug/L	99
86) 1,2-dibromoethane	13.198	107	5022	1.82	ug/L	84
87) n-butyl ether	13.560	57	25121	1.84	ug/L	99
88) chlorobenzene	13.649	112	15300	1.96	ug/L	89
89) 1,1,1,2-tetrachloroethane	13.712	131	5479	1.92	ug/L	93
90) ethylbenzene	13.707	91	26320	1.93	ug/L	99
91) m,p-xylene	13.817	106	20901	3.94	ug/L	94
92) o-xylene	14.226	91	21217	1.92	ug/L	95
93) styrene	14.242	104	15356	1.75	ug/L	96
94) butyl acrylate	14.053	55	9139	1.61	ug/L	98
95) bromoform	14.504	173	3084	1.79	ug/L	98
96) isopropylbenzene	14.561	105	26138	1.90	ug/L	95
97) cis-1,4-dichloro-2-butene	14.635	75	2038	1.63	ug/L	89
100) bromobenzene	14.965	156	6407	1.98	ug/L	87
101) 1,1,2,2-tetrachloroethane	14.871	83	5902	1.83	ug/L	99
102) trans-1,4-dichloro-2-b...	14.913	53	1548	1.83	ug/L	91
103) 1,2,3-trichloropropane	14.939	110	1812	2.04	ug/L	91
104) n-propylbenzene	14.970	91	30973	1.95	ug/L	99
105) 2-chlorotoluene	15.122	126	6311	1.96	ug/L	89
106) 4-chlorotoluene	15.217	91	18377	1.96	ug/L	98
107) 1,3,5-trimethylbenzene	15.122	105	21637	1.90	ug/L	97
108) tert-butylbenzene	15.463	119	18501	1.88	ug/L	94
109) 1,2,4-trimethylbenzene	15.510	105	20813	1.82	ug/L	99
110) sec-butylbenzene	15.678	105	27414	1.86	ug/L	97
111) 1,3-dichlorobenzene	15.867	146	12039	1.96	ug/L	96
112) p-isopropyltoluene	15.793	119	23096	1.84	ug/L	98
113) 1,4-dichlorobenzene	15.946	146	12268	1.95	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156551.D
 Acq On : 9 Oct 2019 4:59 pm
 Operator : roberts
 Sample : ic6949-2
 Misc : MS37796,V2E6949,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 14:24:24 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

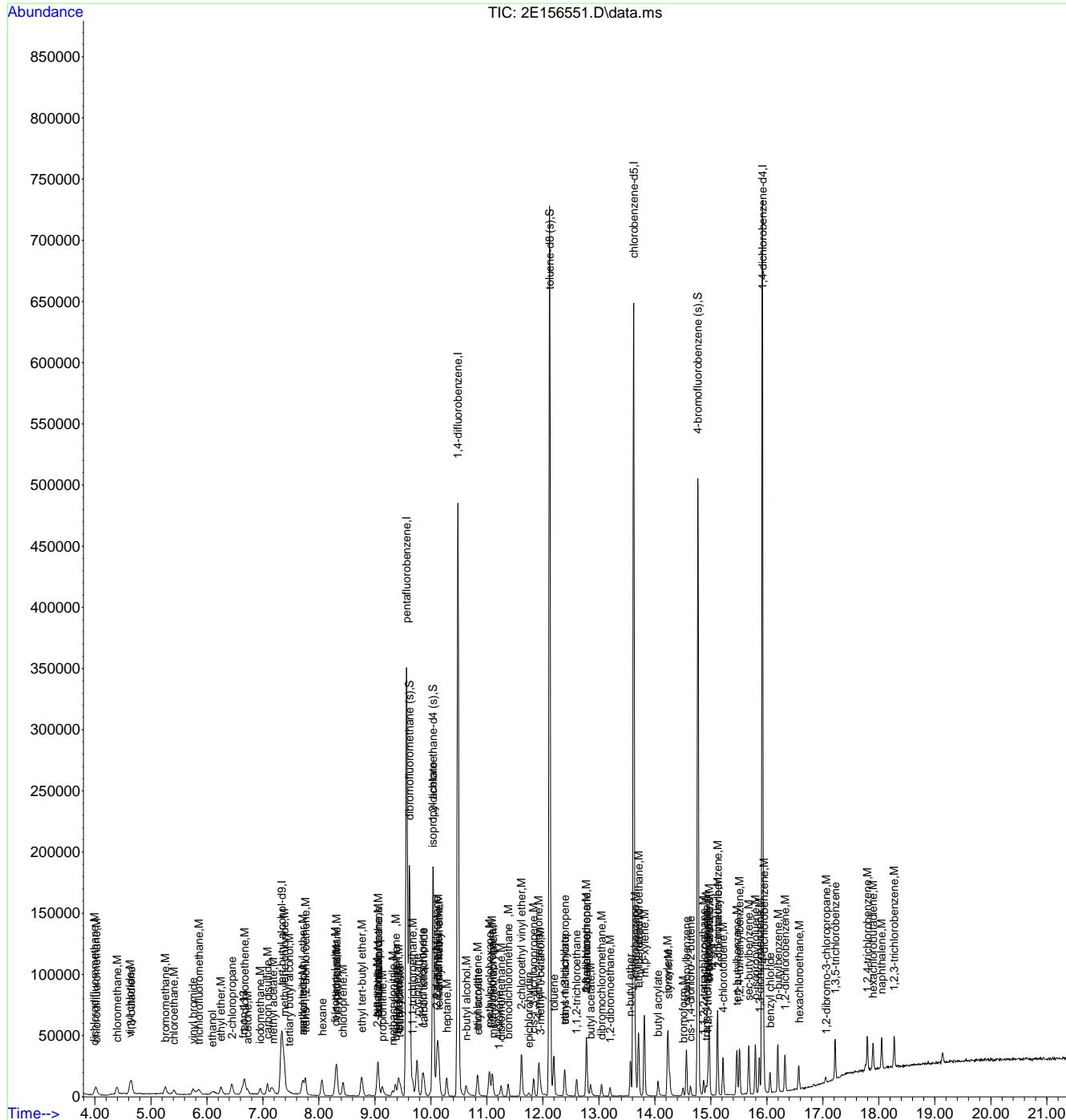
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
114) 1,2-dichlorobenzene	16.323	146	11711	1.92	ug/L	98
115) n-butylbenzene	16.197	92	11788	1.82	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.057	157	1325	1.83	ug/L #	77
117) 1,3,5-trichlorobenzene	17.220	180	9827	1.91	ug/L	96
118) 1,2,4-trichlorobenzene	17.796	180	8506	1.85	ug/L	97
120) hexachlorobutadiene	17.896	225	4627	2.07	ug/L	97
121) naphthalene	18.048	128	19183	1.81	ug/L	96
122) 1,2,3-trichlorobenzene	18.273	180	7892	1.86	ug/L	97
123) hexachloroethane	16.575	201	3184	1.70	ug/L	93
124) benzyl chloride	16.056	91	12298	1.83	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156551.D
Acq On : 9 Oct 2019 4:59 pm
Operator : roberts
Sample : ic6949-2
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 10 14:24:24 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156552.D
 Acq On : 9 Oct 2019 5:29 pm
 Operator : roberts
 Sample : ic6949-4
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 14:26:02 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	121356	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	283871	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	437228	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	354003	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	179581	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	125733	49.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.46%		
55) 1,2-dichloroethane-d4 (s)	10.042	65	133436	50.82	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	101.64%		
76) toluene-d8 (s)	12.118	98	496563	50.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.74%		
99) 4-bromofluorobenzene (s)	14.766	95	174185	49.81	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.62%		
<hr/>						
Target Compounds						
				Qvalue		
2) ethanol	6.104	45	13367	410.36	ug/L	92
3) tertiary butyl alcohol	7.462	59	6071	17.86	ug/L	92
4) 1,4-dioxane	11.216	88	2749	99.06	ug/L	93
6) chlorodifluoromethane	4.018	51	18777	3.88	ug/L	96
7) dichlorodifluoromethane	3.997	85	14167	3.67	ug/L	97
8) chloromethane	4.390	50	18902	3.79	ug/L	93
9) vinyl chloride	4.615	62	18407	3.59	ug/L	98
10) bromomethane	5.255	94	10681	3.73	ug/L	95
11) chloroethane	5.412	64	9805	3.84	ug/L	94
12) trichlorofluoromethane	5.863	101	16528	3.78	ug/L	99
13) 1,3-butadiene	4.652	54	12829	3.69	ug/L	98
14) vinyl bromide	5.748	106	8948	3.72	ug/L	92
15) ethyl ether	6.251	74	6879	3.97	ug/L	90
16) 2-chloropropane	6.440	43	21501	3.93	ug/L	93
17) acrolein	6.513	56	2174	3.87	ug/L	99
18) freon 113	6.644	151	8178	3.77	ug/L	93
19) 1,1-dichloroethene	6.665	61	17240	3.89	ug/L	96
20) acetone	6.718	43	13224	17.28	ug/L	82
21) acetonitrile	7.153	41	19359	50.81	ug/L	95
22) iodomethane	6.948	142	13661	3.88	ug/L	97
23) carbon disulfide	7.079	76	29731	3.80	ug/L	99
24) methylene chloride	7.378	84	12690	4.31	ug/L	94
25) methyl acetate	7.179	43	8639	4.11	ug/L	99
26) methyl tert butyl ether	7.709	73	32783	3.97	ug/L	97
27) trans-1,2-dichloroethene	7.756	61	15567	3.79	ug/L	99
28) hexane	8.049	56	8492	3.59	ug/L #	87
29) di-isopropyl ether	8.296	45	42147	3.82	ug/L #	74
30) ethyl tert-butyl ether	8.762	59	37086	3.83	ug/L	99
31) 2-butanone	9.025	72	4933	15.56	ug/L #	85
32) 1,1-dichloroethane	8.327	63	21479	3.94	ug/L	98
33) chloroprene	8.432	53	17031	3.77	ug/L	97
34) acrylonitrile	7.714	53	4385	4.09	ug/L	97
35) vinyl acetate	8.317	86	2395	3.58	ug/L #	74
36) ethyl acetate	9.051	45	1960	4.37	ug/L #	86
37) 2,2-dichloropropane	9.056	77	18026	3.98	ug/L	97
38) cis-1,2-dichloroethene	9.056	96	12789	3.96	ug/L	96
39) propionitrile	9.124	54	15561	38.56	ug/L	86
40) methyl acrylate	9.130	85	1447	3.60	ug/L #	63
41) bromochloromethane	9.365	128	6189	4.16	ug/L	90
42) tetrahydrofuran	9.407	72	1562	4.25	ug/L #	75

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156552.D
 Acq On : 9 Oct 2019 5:29 pm
 Operator : roberts
 Sample : ic6949-4
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 14:26:02 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	20174	4.11	ug/L	99
44) t-butyl formate	9.449	59	11588	3.89	ug/L	92
45) 1,1-dichloropropene	9.858	75	15785	3.84	ug/L	96
46) carbon tetrachloride	9.879	117	14854	3.83	ug/L	94
47) isopropyl acetate	10.037	87	2780	4.14	ug/L #	77
49) methacrylonitrile	9.308	67	4218	3.72	ug/L	94
50) 1,1,1-trichloroethane	9.675	97	17429	3.90	ug/L	97
51) cyclohexane	9.748	84	17421	3.61	ug/L	93
52) iso-butyl alcohol	9.864	43	5470	43.58	ug/L	88
53) tert amyl alcohol	9.984	73	3697	23.64	ug/L	88
56) 2,2,4-trimethylpentane	10.105	57	34120	3.48	ug/L	96
57) n-butyl alcohol	10.619	56	15456	185.26	ug/L	97
58) benzene	10.115	78	48075	4.01	ug/L	96
59) tert-amyl methyl ether	10.141	73	37241	3.98	ug/L	98
60) heptane	10.283	57	7712	3.37	ug/L	96
61) 1,2-dichloroethane	10.131	62	14835	4.15	ug/L	91
62) ethyl acrylate	10.839	55	12811	3.65	ug/L	93
63) trichloroethene	10.828	95	11261	3.92	ug/L	98
64) 2-nitropropane	11.599	41	3603	3.79	ug/L #	41
65) 2-chloroethyl vinyl ether	11.615	63	34214	18.66	ug/L	97
66) methyl methacrylate	11.096	100	2598	3.52	ug/L #	75
67) 1,2-dichloropropane	11.090	63	12335	3.87	ug/L	97
68) methylcyclohexane	11.043	83	18870	3.48	ug/L	97
69) dibromomethane	11.253	93	6378	3.81	ug/L	87
70) bromodichloromethane	11.379	83	14244	3.76	ug/L	99
71) epichlorohydrin	11.741	57	5352	19.48	ug/L	98
72) cis-1,3-dichloropropene	11.835	75	19287	3.84	ug/L	96
73) 4-methyl-2-pentanone	11.924	58	16621	15.32	ug/L	98
74) 3-methyl-1-butanol	11.950	70	6337	72.89	ug/L	91
77) toluene	12.191	92	28945	4.04	ug/L	99
78) ethyl methacrylate	12.385	69	12622	3.59	ug/L	96
79) trans-1,3-dichloropropene	12.391	75	16076	3.81	ug/L	96
80) 1,1,2-trichloroethane	12.600	83	8371	4.16	ug/L	88
81) tetrachloroethene	12.773	164	9021	3.94	ug/L	95
82) 2-hexanone	12.773	58	14923	14.87	ug/L	97
83) 1,3-dichloropropane	12.784	76	17454	4.15	ug/L	97
84) butyl acetate	12.847	56	6943	3.65	ug/L	93
85) dibromochloromethane	13.046	129	10016	3.72	ug/L	99
86) 1,2-dibromoethane	13.198	107	10404	3.89	ug/L	96
87) n-butyl ether	13.560	57	49769	3.77	ug/L	98
88) chlorobenzene	13.654	112	30261	4.00	ug/L	97
89) 1,1,1,2-tetrachloroethane	13.712	131	10874	3.94	ug/L	92
90) ethylbenzene	13.707	91	52548	3.99	ug/L	98
91) m,p-xylene	13.812	106	39852	7.75	ug/L	98
92) o-xylene	14.226	91	42445	3.98	ug/L	98
93) styrene	14.236	104	30723	3.61	ug/L	99
94) butyl acrylate	14.058	55	19038	3.47	ug/L	94
95) bromoform	14.504	173	5945	3.56	ug/L	93
96) isopropylbenzene	14.561	105	50874	3.82	ug/L	100
97) cis-1,4-dichloro-2-butene	14.635	75	4333	3.58	ug/L	90
100) bromobenzene	14.965	156	12341	3.93	ug/L	93
101) 1,1,2,2-tetrachloroethane	14.865	83	12378	3.97	ug/L	97
102) trans-1,4-dichloro-2-b...	14.913	53	3084	3.76	ug/L	80
103) 1,2,3-trichloropropane	14.944	110	3832	4.45	ug/L	89
104) n-propylbenzene	14.970	91	58135	3.78	ug/L	99
105) 2-chlorotoluene	15.117	126	11802	3.78	ug/L	94
106) 4-chlorotoluene	15.217	91	36019	3.97	ug/L	97
107) 1,3,5-trimethylbenzene	15.117	105	41745	3.79	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156552.D
 Acq On : 9 Oct 2019 5:29 pm
 Operator : roberts
 Sample : ic6949-4
 Misc : MS37796,V2E6949,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 14:26:02 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

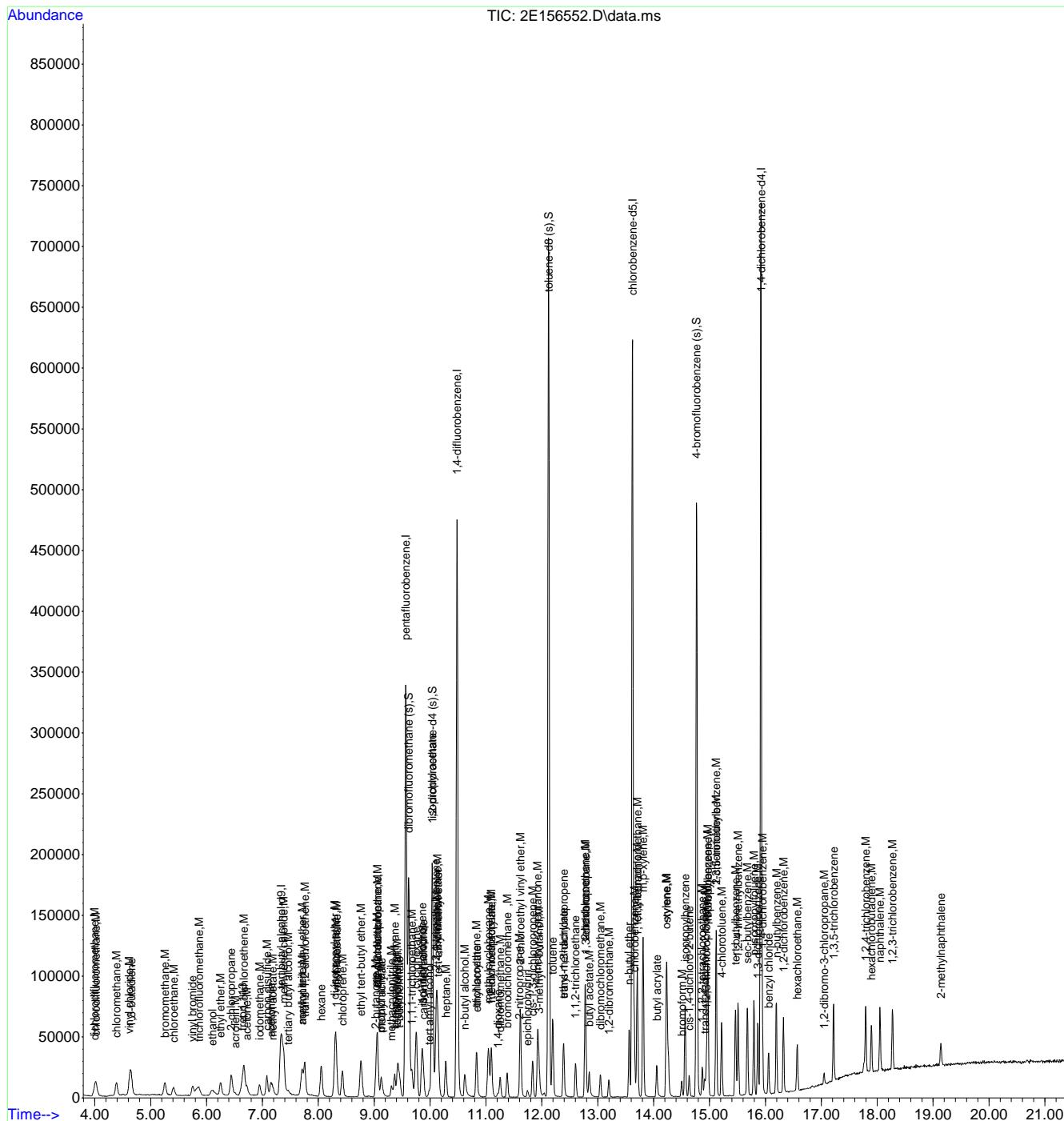
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.463	119	36525	3.83	ug/L	98
109) 1,2,4-trimethylbenzene	15.510	105	41977	3.80	ug/L	97
110) sec-butylbenzene	15.678	105	52200	3.65	ug/L	99
111) 1,3-dichlorobenzene	15.862	146	24170	4.07	ug/L	96
112) p-isopropyltoluene	15.793	119	44447	3.66	ug/L	97
113) 1,4-dichlorobenzene	15.945	146	23805	3.91	ug/L	99
114) 1,2-dichlorobenzene	16.323	146	23596	3.99	ug/L	98
115) n-butylbenzene	16.197	92	22615	3.61	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.046	157	2740	3.91	ug/L	91
117) 1,3,5-trichlorobenzene	17.220	180	18459	3.70	ug/L	97
118) 1,2,4-trichlorobenzene	17.796	180	16798	3.77	ug/L	98
120) hexachlorobutadiene	17.896	225	7459	3.45	ug/L	97
121) naphthalene	18.048	128	37599	3.66	ug/L	99
122) 1,2,3-trichlorobenzene	18.273	180	15107	3.68	ug/L	95
123) hexachloroethane	16.569	201	6288	3.46	ug/L	95
124) benzyl chloride	16.056	91	24365	3.74	ug/L	97
125) 2-methylnaphthalene	19.138	142	9365	1.73	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949
Data File : 2E156552.D
Acq On : 9 Oct 2019 5:29 pm
Operator : roberts
Sample : ic6949-4
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 10 14:26:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156553.D
 Acq On : 9 Oct 2019 6:00 pm
 Operator : roberts
 Sample : ic6949-8
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 10 14:09:53 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	122464	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	292378	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	454525	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	376827	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	190295	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	129258	49.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.26%		
55) 1,2-dichloroethane-d4 (s)	10.036	65	140256	51.38	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	102.76%		
76) toluene-d8 (s)	12.118	98	516815	49.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.48%		
99) 4-bromofluorobenzene (s)	14.766	95	186009	50.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.38%		
Target Compounds						
				Qvalue		
2) ethanol	6.094	45	24907	757.71	ug/L	99
3) tertiary butyl alcohol	7.457	59	12563	36.62	ug/L	89
4) 1,4-dioxane	11.206	88	5300	189.25	ug/L	91
6) chlorodifluoromethane	4.012	51	39641	7.96	ug/L	95
7) dichlorodifluoromethane	3.991	85	31087	7.81	ug/L	99
8) chloromethane	4.384	50	40403	7.87	ug/L	99
9) vinyl chloride	4.610	62	40251	7.62	ug/L	99
10) bromomethane	5.250	94	23992	8.14	ug/L	98
11) chloroethane	5.402	64	20385	7.75	ug/L	99
12) trichlorofluoromethane	5.858	101	35680	7.92	ug/L	91
13) 1,3-butadiene	4.647	54	27715	7.74	ug/L	98
14) vinyl bromide	5.748	106	19399	7.83	ug/L	94
15) ethyl ether	6.246	74	14337	8.03	ug/L	95
16) 2-chloropropane	6.440	43	45175	8.02	ug/L	99
17) acrolein	6.508	56	4656	8.04	ug/L	87
18) freon 113	6.639	151	18324	8.20	ug/L	96
19) 1,1-dichloroethene	6.665	61	35504	7.79	ug/L	95
20) acetone	6.723	43	25861	32.81	ug/L	99
21) acetonitrile	7.147	41	30491	77.70	ug/L	98
22) iodomethane	6.948	142	28881	7.96	ug/L	98
23) carbon disulfide	7.074	76	63306	7.86	ug/L	98
24) methylene chloride	7.378	84	24293	8.01	ug/L	98
25) methyl acetate	7.179	43	17202	7.95	ug/L	95
26) methyl tert butyl ether	7.708	73	65975	7.75	ug/L	97
27) trans-1,2-dichloroethene	7.756	61	33588	7.95	ug/L	99
28) hexane	8.049	56	19954	8.20	ug/L	94
29) di-isopropyl ether	8.296	45	86973	7.65	ug/L	82
30) ethyl tert-butyl ether	8.762	59	77659	7.78	ug/L	97
31) 2-butanone	9.024	72	9848	30.15	ug/L	93
32) 1,1-dichloroethane	8.317	63	45284	8.06	ug/L	97
33) chloroprene	8.427	53	35162	7.55	ug/L	99
34) acrylonitrile	7.703	53	8474	7.67	ug/L	97
35) vinyl acetate	8.311	86	5073	7.37	ug/L #	75
36) ethyl acetate	9.051	45	4153	8.98	ug/L #	44
37) 2,2-dichloropropane	9.056	77	37614	8.06	ug/L	97
38) cis-1,2-dichloroethene	9.051	96	26548	7.99	ug/L	97
39) propionitrile	9.119	54	32052	77.12	ug/L	89
40) methyl acrylate	9.124	85	2835	6.85	ug/L #	86
41) bromochloromethane	9.360	128	12324	8.04	ug/L	97
42) tetrahydrofuran	9.418	72	3167	8.37	ug/L #	72

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156553.D
 Acq On : 9 Oct 2019 6:00 pm
 Operator : roberts
 Sample : ic6949-8
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 10 14:09:53 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

7.6.6

7

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	41196	8.14	ug/L	92
44) t-butyl formate	9.449	59	23643	7.70	ug/L	92
45) 1,1-dichloropropene	9.848	75	32667	7.72	ug/L	94
46) carbon tetrachloride	9.879	117	31417	7.86	ug/L	93
47) isopropyl acetate	10.031	87	5340	7.72	ug/L #	86
49) methacrylonitrile	9.302	67	8624	7.38	ug/L	99
50) 1,1,1-trichloroethane	9.675	97	37217	8.09	ug/L	97
51) cyclohexane	9.748	84	39610	7.98	ug/L	97
52) iso-butyl alcohol	9.858	43	9316	72.05	ug/L	94
53) tert amyl alcohol	9.989	73	6963	43.22	ug/L	96
56) 2,2,4-trimethylpentane	10.105	57	83372	8.17	ug/L	98
57) n-butyl alcohol	10.613	56	30844	355.64	ug/L	97
58) benzene	10.115	78	99069	7.95	ug/L	99
59) tert-amyl methyl ether	10.141	73	75615	7.77	ug/L	98
60) heptane	10.278	57	19425	8.16	ug/L	94
61) 1,2-dichloroethane	10.131	62	30209	8.12	ug/L	97
62) ethyl acrylate	10.833	55	27228	7.45	ug/L	98
63) trichloroethene	10.828	95	23854	7.99	ug/L	97
64) 2-nitropropane	11.609	41	7468	7.56	ug/L #	3
65) 2-chloroethyl vinyl ether	11.615	63	72153	37.86	ug/L	99
66) methyl methacrylate	11.095	100	5674	7.40	ug/L #	94
67) 1,2-dichloropropane	11.090	63	25781	7.79	ug/L	95
68) methylcyclohexane	11.038	83	45549	8.08	ug/L	97
69) dibromomethane	11.253	93	13433	7.73	ug/L	95
70) bromodichloromethane	11.379	83	30497	7.75	ug/L	99
71) epichlorohydrin	11.740	57	10706	37.48	ug/L	93
72) cis-1,3-dichloropropene	11.835	75	39391	7.55	ug/L	97
73) 4-methyl-2-pentanone	11.924	58	33783	29.95	ug/L	95
74) 3-methyl-1-butanol	11.945	70	12859	142.28	ug/L	95
77) toluene	12.191	92	60058	7.88	ug/L	97
78) ethyl methacrylate	12.380	69	27297	7.29	ug/L	95
79) trans-1,3-dichloropropene	12.385	75	33928	7.56	ug/L	99
80) 1,1,2-trichloroethane	12.600	83	16596	7.74	ug/L	98
81) tetrachloroethene	12.773	164	19634	8.05	ug/L	97
82) 2-hexanone	12.773	58	31307	29.31	ug/L	95
83) 1,3-dichloropropane	12.784	76	35073	7.83	ug/L	98
84) butyl acetate	12.847	56	15686	7.75	ug/L	90
85) dibromochloromethane	13.046	129	21376	7.46	ug/L	98
86) 1,2-dibromoethane	13.193	107	22000	7.73	ug/L	98
87) n-butyl ether	13.560	57	105277	7.50	ug/L	99
88) chlorobenzene	13.654	112	62964	7.82	ug/L	99
89) 1,1,1,2-tetrachloroethane	13.712	131	22639	7.70	ug/L	97
90) ethylbenzene	13.707	91	110038	7.85	ug/L	99
91) m,p-xylene	13.811	106	85478	15.62	ug/L	99
92) o-xylene	14.226	91	87801	7.73	ug/L	99
93) styrene	14.236	104	67467	7.46	ug/L	98
94) butyl acrylate	14.053	55	41274	7.06	ug/L	100
95) bromoform	14.503	173	13402	7.53	ug/L	95
96) isopropylbenzene	14.561	105	108698	7.68	ug/L	99
97) cis-1,4-dichloro-2-butene	14.635	75	8894	6.90	ug/L	96
100) bromobenzene	14.960	156	26002	7.82	ug/L	95
101) 1,1,2,2-tetrachloroethane	14.870	83	25147	7.61	ug/L	95
102) trans-1,4-dichloro-2-b...	14.912	53	6431	7.41	ug/L	96
103) 1,2,3-trichloropropane	14.944	110	7508	8.23	ug/L	98
104) n-propylbenzene	14.970	91	128176	7.87	ug/L	99
105) 2-chlorotoluene	15.117	126	26500	8.01	ug/L	92
106) 4-chlorotoluene	15.217	91	76648	7.97	ug/L	99
107) 1,3,5-trimethylbenzene	15.117	105	90972	7.79	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156553.D
 Acq On : 9 Oct 2019 6:00 pm
 Operator : roberts
 Sample : ic6949-8
 Misc : MS37796,V2E6949,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 10 14:09:53 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

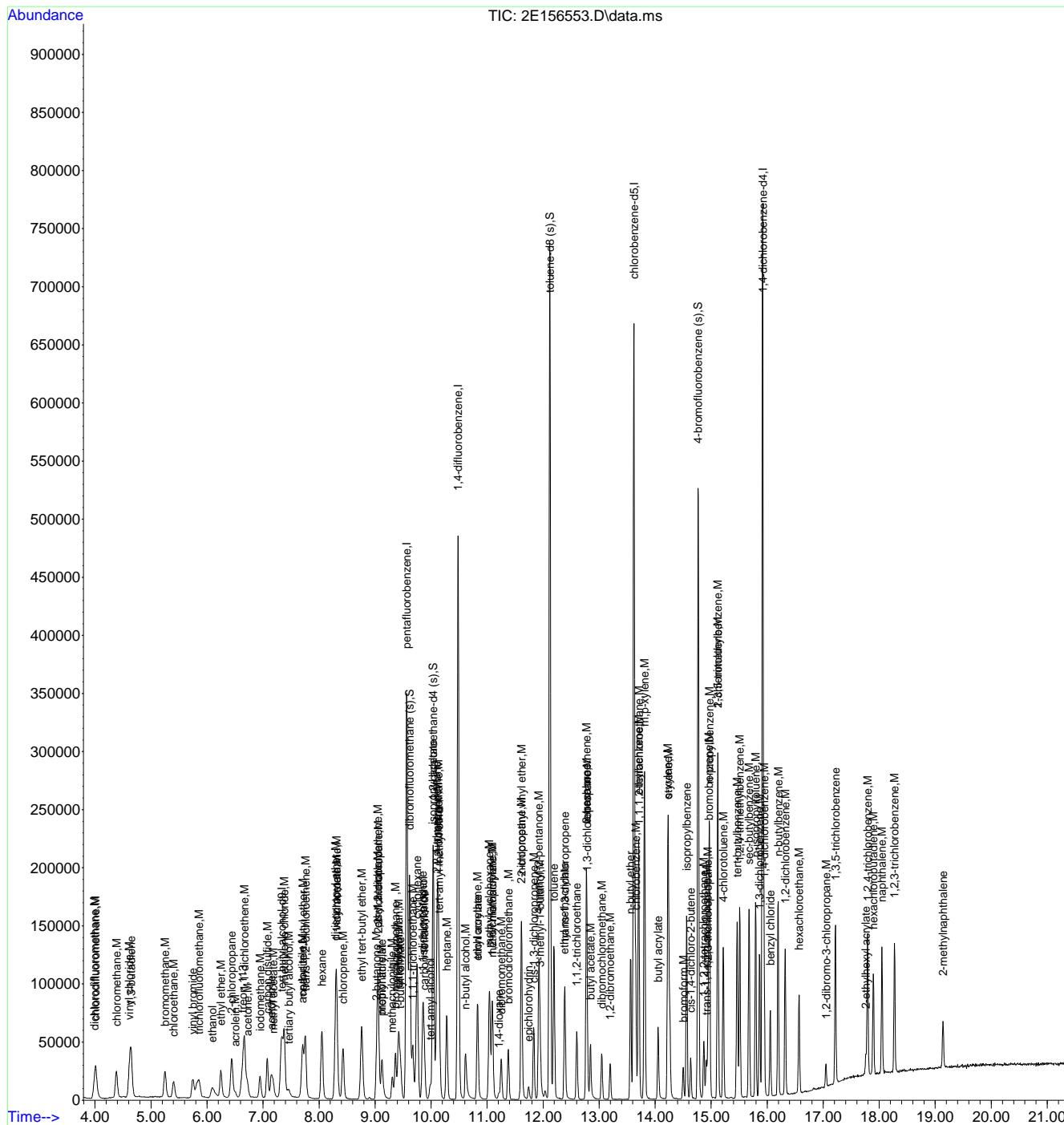
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.463	119	78247	7.74	ug/L	98
109) 1,2,4-trimethylbenzene	15.510	105	92055	7.86	ug/L	97
110) sec-butylbenzene	15.678	105	115731	7.65	ug/L	99
111) 1,3-dichlorobenzene	15.861	146	49872	7.93	ug/L	96
112) p-isopropyltoluene	15.793	119	99394	7.72	ug/L	99
113) 1,4-dichlorobenzene	15.945	146	51140	7.94	ug/L	98
114) 1,2-dichlorobenzene	16.323	146	48903	7.81	ug/L	98
115) n-butylbenzene	16.197	92	49642	7.48	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.052	157	5589	7.52	ug/L	98
117) 1,3,5-trichlorobenzene	17.219	180	40833	7.73	ug/L	99
118) 1,2,4-trichlorobenzene	17.796	180	35775	7.57	ug/L	97
119) 2-ethylhexyl acrylate	17.759	70	4323	1.28	ug/L	97
120) hexachlorobutadiene	17.896	225	17618	7.69	ug/L	95
121) naphthalene	18.048	128	81025	7.43	ug/L	99
122) 1,2,3-trichlorobenzene	18.273	180	33170	7.63	ug/L	98
123) hexachloroethane	16.569	201	13625	7.07	ug/L	96
124) benzyl chloride	16.055	91	51837	7.51	ug/L	99
125) 2-methylnaphthalene	19.138	142	20104	3.50	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156553.D
 Acq On : 9 Oct 2019 6:00 pm
 Operator : roberts
 Sample : ic6949-8
 Misc : MS37796,V2E6949,5,,,.1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 10 14:09:53 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156554.D
 Acq On : 9 Oct 2019 6:30 pm
 Operator : roberts
 Sample : ic6949-20
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 10 14:09:55 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	126048	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	287634	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	450579	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	370758	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	184808	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	127710	49.85	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.70%		
55) 1,2-dichloroethane-d4 (s)	10.037	65	133335	49.28	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	98.56%		
76) toluene-d8 (s)	12.118	98	510730	49.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.92%		
99) 4-bromofluorobenzene (s)	14.766	95	182330	50.66	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.32%		
Target Compounds						
				Qvalue		
2) ethanol	6.094	45	66183	1956.13	ug/L	95
3) tertiary butyl alcohol	7.457	59	32120	90.96	ug/L	95
4) 1,4-dioxane	11.206	88	13910	482.58	ug/L	99
6) chlorodifluoromethane	4.018	51	92478	18.88	ug/L	98
7) dichlorodifluoromethane	3.997	85	70332	17.96	ug/L	99
8) chloromethane	4.390	50	93132	18.45	ug/L	99
9) vinyl chloride	4.621	62	95042	18.29	ug/L	99
10) bromomethane	5.250	94	54726	18.88	ug/L	97
11) chloroethane	5.402	64	48695	18.82	ug/L	99
12) trichlorofluoromethane	5.858	101	80362	18.14	ug/L	98
13) 1,3-butadiene	4.647	54	64273	18.25	ug/L	99
14) vinyl bromide	5.753	106	44988	18.46	ug/L	99
15) ethyl ether	6.251	74	33606	19.13	ug/L	96
16) 2-chloropropane	6.445	43	102534	18.49	ug/L	99
17) acrolein	6.503	56	11750	20.63	ug/L	92
18) freon 113	6.639	151	41705	18.96	ug/L	96
19) 1,1-dichloroethene	6.671	61	84524	18.84	ug/L	97
20) acetone	6.718	43	61336	79.10	ug/L	99
21) acetonitrile	7.142	41	76234	197.46	ug/L	99
22) iodomethane	6.948	142	67743	18.97	ug/L	98
23) carbon disulfide	7.074	76	149225	18.84	ug/L	98
24) methylene chloride	7.378	84	57813	19.37	ug/L	95
25) methyl acetate	7.179	43	41377	19.44	ug/L	99
26) methyl tert butyl ether	7.709	73	160929	19.22	ug/L	99
27) trans-1,2-dichloroethene	7.756	61	78725	18.93	ug/L	97
28) hexane	8.049	56	44031	18.39	ug/L #	88
29) di-isopropyl ether	8.296	45	213153	19.05	ug/L	95
30) ethyl tert-butyl ether	8.763	59	187811	19.12	ug/L	98
31) 2-butanone	9.019	72	24547	76.40	ug/L	95
32) 1,1-dichloroethane	8.317	63	106203	19.22	ug/L	97
33) chloroprene	8.427	53	84898	18.52	ug/L	98
34) acrylonitrile	7.703	53	21261	19.56	ug/L	98
35) vinyl acetate	8.301	86	12391	18.30	ug/L	96
36) ethyl acetate	9.040	45	9532	20.96	ug/L	95
37) 2,2-dichloropropane	9.056	77	87645	19.10	ug/L	97
38) cis-1,2-dichloroethene	9.051	96	63167	19.32	ug/L	99
39) propionitrile	9.119	54	80390	196.62	ug/L	99
40) methyl acrylate	9.124	85	7646	18.79	ug/L #	83
41) bromochloromethane	9.365	128	29157	19.33	ug/L	96
42) tetrahydrofuran	9.407	72	7191	19.32	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156554.D
 Acq On : 9 Oct 2019 6:30 pm
 Operator : roberts
 Sample : ic6949-20
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 10 14:09:55 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	95347	19.15	ug/L	98
44) t-butyl formate	9.455	59	58953	19.52	ug/L	97
45) 1,1-dichloropropene	9.848	75	78112	18.77	ug/L	97
46) carbon tetrachloride	9.879	117	73988	18.81	ug/L	99
47) isopropyl acetate	10.037	87	13136	19.31	ug/L #	91
49) methacrylonitrile	9.303	67	21806	18.97	ug/L	98
50) 1,1,1-trichloroethane	9.675	97	86702	19.16	ug/L	99
51) cyclohexane	9.748	84	88337	18.09	ug/L #	86
52) iso-butyl alcohol	9.858	43	25153	197.75	ug/L	92
53) tert amyl alcohol	9.984	73	16094	101.55	ug/L	88
56) 2,2,4-trimethylpentane	10.105	57	182581	18.05	ug/L	98
57) n-butyl alcohol	10.608	56	85589	995.50	ug/L	98
58) benzene	10.115	78	236031	19.12	ug/L	99
59) tert-amyl methyl ether	10.141	73	183377	19.02	ug/L	99
60) heptane	10.278	57	42887	18.18	ug/L	99
61) 1,2-dichloroethane	10.126	62	72222	19.59	ug/L	99
62) ethyl acrylate	10.828	55	67558	18.65	ug/L	99
63) trichloroethene	10.828	95	55429	18.72	ug/L	97
64) 2-nitropropane	11.604	41	18449	18.84	ug/L #	27
65) 2-chloroethyl vinyl ether	11.610	63	179292	94.90	ug/L	98
66) methyl methacrylate	11.096	100	14251	18.76	ug/L	97
67) 1,2-dichloropropane	11.090	63	62856	19.16	ug/L	96
68) methylcyclohexane	11.043	83	102262	18.31	ug/L	99
69) dibromomethane	11.253	93	33107	19.21	ug/L	98
70) bromodichloromethane	11.379	83	73455	18.84	ug/L	98
71) epichlorohydrin	11.741	57	27420	96.84	ug/L	97
72) cis-1,3-dichloropropene	11.830	75	97096	18.76	ug/L	98
73) 4-methyl-2-pentanone	11.924	58	86007	76.92	ug/L	99
74) 3-methyl-1-butanol	11.945	70	35611	397.48	ug/L	95
77) toluene	12.191	92	141046	18.81	ug/L	98
78) ethyl methacrylate	12.380	69	67563	18.34	ug/L	98
79) trans-1,3-dichloropropene	12.385	75	83930	19.00	ug/L	99
80) 1,1,2-trichloroethane	12.600	83	40755	19.32	ug/L	97
81) tetrachloroethene	12.773	164	46006	19.18	ug/L	99
82) 2-hexanone	12.768	58	79023	75.19	ug/L	94
83) 1,3-dichloropropane	12.784	76	84727	19.22	ug/L	99
84) butyl acetate	12.842	56	37687	18.94	ug/L	91
85) dibromochloromethane	13.046	129	53292	18.91	ug/L	95
86) 1,2-dibromoethane	13.198	107	53724	19.20	ug/L	96
87) n-butyl ether	13.560	57	254289	18.40	ug/L	100
88) chlorobenzene	13.654	112	152093	19.19	ug/L	98
89) 1,1,1,2-tetrachloroethane	13.712	131	55887	19.33	ug/L	97
90) ethylbenzene	13.707	91	260798	18.90	ug/L	99
91) m,p-xylene	13.812	106	204368	37.96	ug/L	99
92) o-xylene	14.226	91	212683	19.02	ug/L	99
93) styrene	14.236	104	164102	18.43	ug/L	98
94) butyl acrylate	14.053	55	105903	18.41	ug/L	97
95) bromoform	14.498	173	33512	19.15	ug/L	95
96) isopropylbenzene	14.561	105	262948	18.87	ug/L	99
97) cis-1,4-dichloro-2-butene	14.635	75	22786	17.97	ug/L	97
100) bromobenzene	14.965	156	62909	19.48	ug/L	92
101) 1,1,2,2-tetrachloroethane	14.865	83	62658	19.51	ug/L	99
102) trans-1,4-dichloro-2-b...	14.913	53	16301	19.33	ug/L	94
103) 1,2,3-trichloropropane	14.939	110	17613	19.87	ug/L	96
104) n-propylbenzene	14.970	91	307107	19.42	ug/L	99
105) 2-chlorotoluene	15.117	126	63075	19.62	ug/L	100
106) 4-chlorotoluene	15.217	91	182711	19.57	ug/L	100
107) 1,3,5-trimethylbenzene	15.117	105	215809	19.03	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156554.D
 Acq On : 9 Oct 2019 6:30 pm
 Operator : roberts
 Sample : ic6949-20
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 10 14:09:55 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

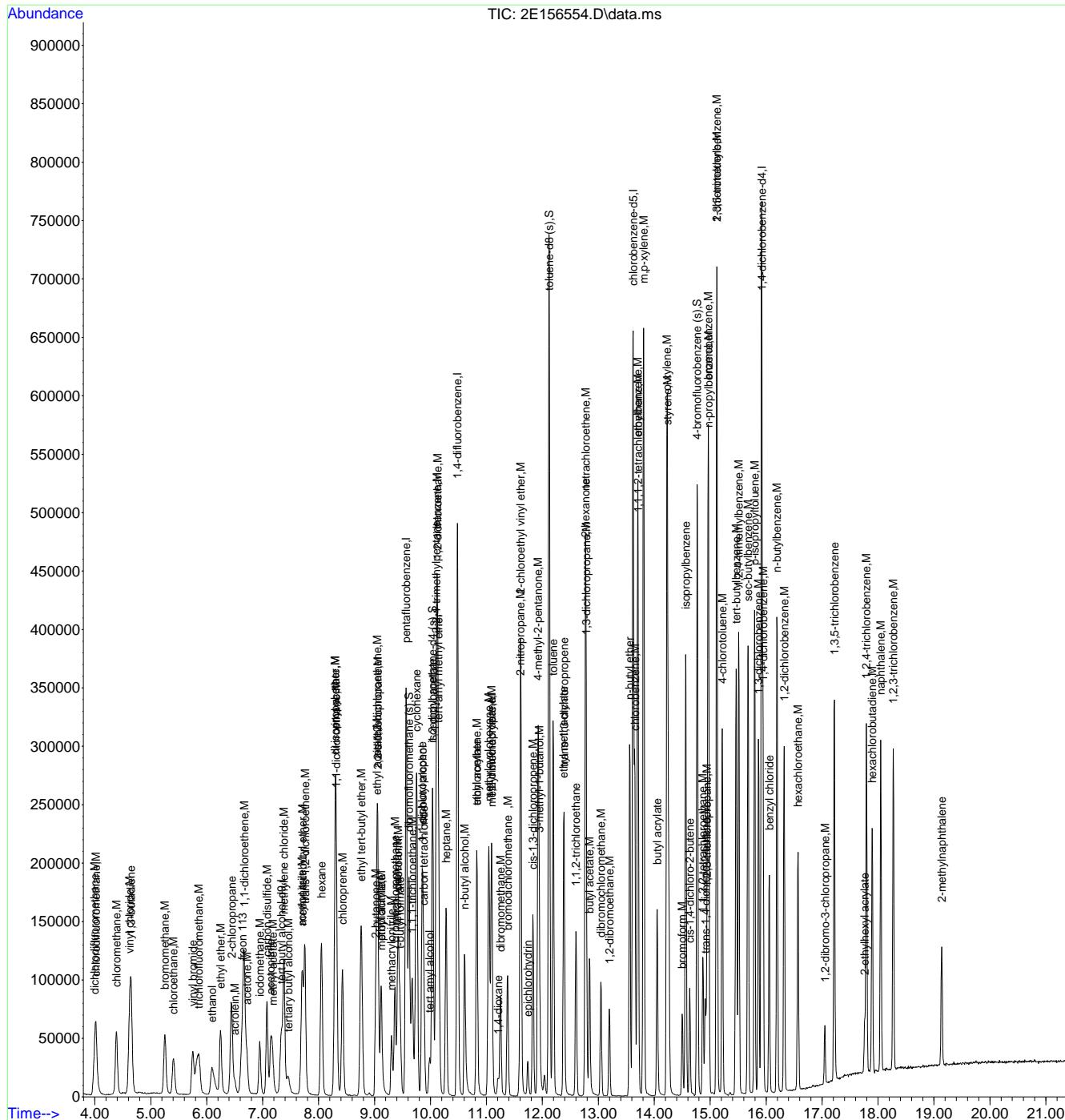
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.463	119	187642	19.10	ug/L	100
109) 1,2,4-trimethylbenzene	15.510	105	219487	19.29	ug/L	100
110) sec-butylbenzene	15.678	105	280171	19.06	ug/L	100
111) 1,3-dichlorobenzene	15.862	146	119548	19.57	ug/L	99
112) p-isopropyltoluene	15.793	119	238277	19.07	ug/L	100
113) 1,4-dichlorobenzene	15.945	146	122232	19.53	ug/L	98
114) 1,2-dichlorobenzene	16.323	146	118823	19.54	ug/L	98
115) n-butylbenzene	16.192	92	122831	19.07	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.052	157	13618	18.87	ug/L	97
117) 1,3,5-trichlorobenzene	17.220	180	99349	19.36	ug/L	100
118) 1,2,4-trichlorobenzene	17.791	180	88244	19.23	ug/L	99
119) 2-ethylhexyl acrylate	17.760	70	11447	3.50	ug/L	99
120) hexachlorobutadiene	17.896	225	43013	19.34	ug/L	98
121) naphthalene	18.048	128	206917	19.55	ug/L	100
122) 1,2,3-trichlorobenzene	18.273	180	81606	19.33	ug/L	98
123) hexachloroethane	16.569	201	34635	18.52	ug/L	99
124) benzyl chloride	16.056	91	128954	19.23	ug/L	98
125) 2-methylnaphthalene	19.139	142	52826	9.47	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156554.D
Acq On : 9 Oct 2019 6:30 pm
Operator : roberts
Sample : ic6949-20
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 10 14:09:55 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156555.D
 Acq On : 9 Oct 2019 7:00 pm
 Operator : roberts
 Sample : icc6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 10 14:09:57 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	108412	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	267932	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	420308	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	349962	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	178330	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	119322	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
55) 1,2-dichloroethane-d4 (s)	10.036	65	126204	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
76) toluene-d8 (s)	12.118	98	482517	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
99) 4-bromofluorobenzene (s)	14.766	95	173644	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						
				Qvalue		
2) ethanol	6.083	45	145499	5000.00	ug/L	100
3) tertiary butyl alcohol	7.452	59	75927	250.00	ug/L	100
4) 1,4-dioxane	11.206	88	30989	1250.00	ug/L	100
6) chlorodifluoromethane	4.017	51	228135	50.00	ug/L	100
7) dichlorodifluoromethane	3.996	85	182406	50.00	ug/L	100
8) chloromethane	4.384	50	235118	50.00	ug/L	100
9) vinyl chloride	4.620	62	241978	50.00	ug/L	100
10) bromomethane	5.255	94	135010	50.00	ug/L	100
11) chloroethane	5.402	64	120508	50.00	ug/L	100
12) trichlorofluoromethane	5.853	101	206319	50.00	ug/L	100
13) 1,3-butadiene	4.647	54	163994	50.00	ug/L	100
14) vinyl bromide	5.748	106	113530	50.00	ug/L	100
15) ethyl ether	6.246	74	81815	50.00	ug/L	100
16) 2-chloropropane	6.440	43	258244	50.00	ug/L	100
17) acrolein	6.497	56	26533	50.00	ug/L	100
18) freon 113	6.639	151	102448	50.00	ug/L	100
19) 1,1-dichloroethene	6.670	61	208906	50.00	ug/L	100
20) acetone	6.712	43	144461	200.00	ug/L	100
21) acetonitrile	7.142	41	179811	500.00	ug/L	100
22) iodomethane	6.948	142	166332	50.00	ug/L	100
23) carbon disulfide	7.074	76	368814	50.00	ug/L	100
24) methylene chloride	7.383	84	139047	50.00	ug/L	100
25) methyl acetate	7.174	43	99122	50.00	ug/L	100
26) methyl tert butyl ether	7.709	73	389904	50.00	ug/L	100
27) trans-1,2-dichloroethene	7.756	61	193663	50.00	ug/L	100
28) hexane	8.049	56	111540	50.00	ug/L	100
29) di-isopropyl ether	8.296	45	521012	50.00	ug/L	100
30) ethyl tert-butyl ether	8.762	59	457516	50.00	ug/L	100
31) 2-butanone	9.014	72	59857	200.00	ug/L	100
32) 1,1-dichloroethane	8.317	63	257420	50.00	ug/L	100
33) chloroprene	8.427	53	213454	50.00	ug/L	100
34) acrylonitrile	7.703	53	50623	50.00	ug/L	100
35) vinyl acetate	8.301	86	31540	50.00	ug/L	100
36) ethyl acetate	9.040	45	21180	50.00	ug/L	100
37) 2,2-dichloropropane	9.056	77	213723	50.00	ug/L	100
38) cis-1,2-dichloroethene	9.051	96	152281	50.00	ug/L	100
39) propionitrile	9.114	54	190430	500.00	ug/L	100
40) methyl acrylate	9.119	85	18952	50.00	ug/L	100
41) bromochloromethane	9.360	128	70268	50.00	ug/L	100
42) tetrahydrofuran	9.407	72	17335	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156555.D
 Acq On : 9 Oct 2019 7:00 pm
 Operator : roberts
 Sample : icc6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 10 14:09:57 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	231856	50.00	ug/L	100
44) t-butyl formate	9.449	59	140659	50.00	ug/L	100
45) 1,1-dichloropropene	9.848	75	193857	50.00	ug/L	100
46) carbon tetrachloride	9.874	117	183211	50.00	ug/L	100
47) isopropyl acetate	10.031	87	31676	50.00	ug/L	100
49) methacrylonitrile	9.302	67	53548	50.00	ug/L	100
50) 1,1,1-trichloroethane	9.675	97	210797	50.00	ug/L	100
51) cyclohexane	9.743	84	227433	50.00	ug/L	100
52) iso-butyl alcohol	9.853	43	59241	500.00	ug/L	100
53) tert amyl alcohol	9.984	73	36907	250.00	ug/L	100
56) 2,2,4-trimethylpentane	10.110	57	471879	50.00	ug/L	100
57) n-butyl alcohol	10.608	56	200499	2500.00	ug/L	100
58) benzene	10.115	78	575868	50.00	ug/L	100
59) tert-amyl methyl ether	10.147	73	449733	50.00	ug/L	100
60) heptane	10.278	57	110018	50.00	ug/L	100
61) 1,2-dichloroethane	10.126	62	171944	50.00	ug/L	100
62) ethyl acrylate	10.828	55	168932	50.00	ug/L	100
63) trichloroethene	10.828	95	138086	50.00	ug/L	100
64) 2-nitropropane	11.599	41	45674	50.00	ug/L	100
65) 2-chloroethyl vinyl ether	11.609	63	440598	250.00	ug/L	100
66) methyl methacrylate	11.090	100	35439	50.00	ug/L	100
67) 1,2-dichloropropane	11.090	63	153011	50.00	ug/L	100
68) methylcyclohexane	11.043	83	260562	50.00	ug/L	100
69) dibromomethane	11.248	93	80372	50.00	ug/L	100
70) bromodichloromethane	11.379	83	181865	50.00	ug/L	100
71) epichlorohydrin	11.735	57	66031	250.00	ug/L	100
72) cis-1,3-dichloropropene	11.830	75	241371	50.00	ug/L	100
73) 4-methyl-2-pentanone	11.919	58	208598	200.00	ug/L	100
74) 3-methyl-1-butanol	11.940	70	83572	1000.00	ug/L	100
77) toluene	12.191	92	353964	50.00	ug/L	100
78) ethyl methacrylate	12.380	69	173905	50.00	ug/L	100
79) trans-1,3-dichloropropene	12.385	75	208511	50.00	ug/L	100
80) 1,1,2-trichloroethane	12.600	83	99539	50.00	ug/L	100
81) tetrachloroethene	12.773	164	113190	50.00	ug/L	100
82) 2-hexanone	12.768	58	198411	200.00	ug/L	100
83) 1,3-dichloropropane	12.784	76	208010	50.00	ug/L	100
84) butyl acetate	12.841	56	93934	50.00	ug/L	100
85) dibromochloromethane	13.046	129	132991	50.00	ug/L	100
86) 1,2-dibromoethane	13.193	107	132093	50.00	ug/L	100
87) n-butyl ether	13.560	57	652069	50.00	ug/L	100
88) chlorobenzene	13.654	112	373995	50.00	ug/L	100
89) 1,1,1,2-tetrachloroethane	13.712	131	136444	50.00	ug/L	100
90) ethylbenzene	13.707	91	651243	50.00	ug/L	100
91) m,p-xylene	13.811	106	508131	100.00	ug/L	100
92) o-xylene	14.226	91	527691	50.00	ug/L	100
93) styrene	14.236	104	420199	50.00	ug/L	100
94) butyl acrylate	14.047	55	271514	50.00	ug/L	100
95) bromoform	14.498	173	82602	50.00	ug/L	100
96) isopropylbenzene	14.561	105	657521	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	14.635	75	59830	50.00	ug/L	100
100) bromobenzene	14.960	156	155776	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	14.871	83	154935	50.00	ug/L	100
102) trans-1,4-dichloro-2-b...	14.907	53	40678	50.00	ug/L	100
103) 1,2,3-trichloropropane	14.944	110	42767	50.00	ug/L	100
104) n-propylbenzene	14.970	91	763057	50.00	ug/L	100
105) 2-chlorotoluene	15.117	126	155083	50.00	ug/L	100
106) 4-chlorotoluene	15.217	91	450506	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	15.117	105	547185	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156555.D
 Acq On : 9 Oct 2019 7:00 pm
 Operator : roberts
 Sample : icc6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 10 14:09:57 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

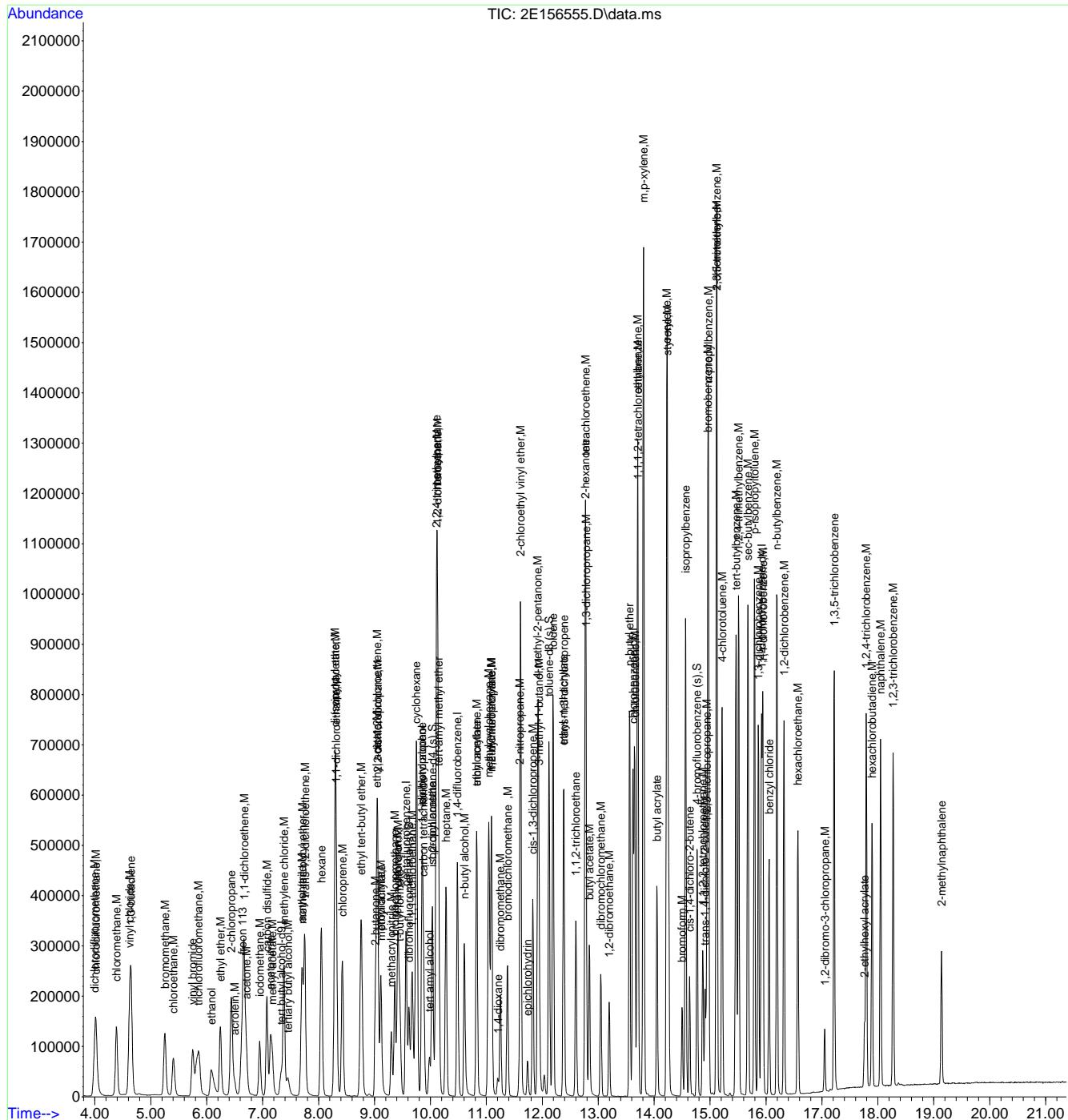
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.463	119	473884	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	15.510	105	549054	50.00	ug/L	100
110) sec-butylbenzene	15.678	105	709158	50.00	ug/L	100
111) 1,3-dichlorobenzene	15.861	146	294762	50.00	ug/L	100
112) p-isopropyltoluene	15.793	119	602900	50.00	ug/L	100
113) 1,4-dichlorobenzene	15.945	146	301966	50.00	ug/L	100
114) 1,2-dichlorobenzene	16.323	146	293329	50.00	ug/L	100
115) n-butylbenzene	16.192	92	310787	50.00	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.052	157	34828	50.00	ug/L	100
117) 1,3,5-trichlorobenzene	17.219	180	247581	50.00	ug/L	100
118) 1,2,4-trichlorobenzene	17.791	180	221394	50.00	ug/L	100
119) 2-ethylhexyl acrylate	17.759	70	31540	10.00	ug/L	100
120) hexachlorobutadiene	17.896	225	107296	50.00	ug/L	100
121) naphthalene	18.048	128	510646	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	18.273	180	203658	50.00	ug/L	100
123) hexachloroethane	16.569	201	90252	50.00	ug/L	100
124) benzyl chloride	16.055	91	323616	50.00	ug/L	100
125) 2-methylnaphthalene	19.138	142	134517	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156555.D
Acq On : 9 Oct 2019 7:00 pm
Operator : roberts
Sample : icc6949-50
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 10 14:09:57 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156556.D
 Acq On : 9 Oct 2019 7:30 pm
 Operator : roberts
 Sample : ic6949-100
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 10 14:09:59 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.331	65	97589	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	275682	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	437894	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	368441	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	188046	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	123920	50.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.94%			
55) 1,2-dichloroethane-d4 (s)	10.036	65	127596	48.52	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 97.04%			
76) toluene-d8 (s)	12.118	98	502806	49.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.98%			
99) 4-bromofluorobenzene (s)	14.766	95	183338	50.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.12%			
<hr/>						
Target Compounds				Qvalue		
2) ethanol	6.078	45	251864	9615.07	ug/L	99
3) tertiary butyl alcohol	7.446	59	140020	512.17	ug/L	97
4) 1,4-dioxane	11.200	88	51682	2315.89	ug/L	94
6) chlorodifluoromethane	4.012	51	472891	100.73	ug/L	99
7) dichlorodifluoromethane	3.986	85	368433	98.15	ug/L	100
8) chloromethane	4.379	50	479863	99.18	ug/L	99
9) vinyl chloride	4.610	62	502464	100.91	ug/L	100
10) bromomethane	5.244	94	290109	104.42	ug/L	99
11) chloroethane	5.396	64	254789	102.74	ug/L	100
12) trichlorofluoromethane	5.847	101	428143	100.84	ug/L	99
13) 1,3-butadiene	4.641	54	345002	102.23	ug/L	98
14) vinyl bromide	5.742	106	243052	104.03	ug/L	97
15) ethyl ether	6.240	74	172476	102.44	ug/L	99
16) 2-chloropropane	6.434	43	530773	99.88	ug/L	99
17) acrolein	6.497	56	56623	103.70	ug/L	99
18) freon 113	6.639	151	223121	105.83	ug/L	99
19) 1,1-dichloroethene	6.665	61	440039	102.36	ug/L	97
20) acetone	6.702	43	282911	380.67	ug/L	97
21) acetonitrile	7.137	41	342579	925.83	ug/L	98
22) iodomethane	6.943	142	358700	104.80	ug/L	96
23) carbon disulfide	7.074	76	787578	103.77	ug/L	99
24) methylene chloride	7.378	84	295542	103.29	ug/L	97
25) methyl acetate	7.168	43	202026	99.04	ug/L	98
26) methyl tert butyl ether	7.708	73	816048	101.71	ug/L	99
27) trans-1,2-dichloroethene	7.750	61	406846	102.09	ug/L	97
28) hexane	8.049	56	233501	101.73	ug/L	95
29) di-isopropyl ether	8.296	45	1083128	101.02	ug/L	95
30) ethyl tert-butyl ether	8.757	59	951935	101.11	ug/L	98
31) 2-butanone	9.009	72	118375	384.41	ug/L	94
32) 1,1-dichloroethane	8.317	63	532602	100.54	ug/L	100
33) chloroprene	8.422	53	447745	101.93	ug/L	98
34) acrylonitrile	7.698	53	101396	97.33	ug/L	98
35) vinyl acetate	8.301	86	64747	99.76	ug/L #	86
36) ethyl acetate	9.035	45	424236	97.36	ug/L #	65
37) 2,2-dichloropropane	9.056	77	442851	100.69	ug/L	99
38) cis-1,2-dichloroethene	9.051	96	321643	102.64	ug/L	95
39) propionitrile	9.114	54	369203	942.14	ug/L	92
40) methyl acrylate	9.114	85	40407	103.61	ug/L #	91
41) bromochloromethane	9.360	128	150472	104.06	ug/L	96
42) tetrahydrofuran	9.407	72	34934	97.93	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156556.D
 Acq On : 9 Oct 2019 7:30 pm
 Operator : roberts
 Sample : ic6949-100
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 10 14:09:59 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

7.6.9

7

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	489611	102.62	ug/L	100
44) t-butyl formate	9.444	59	290203	100.26	ug/L	96
45) 1,1-dichloropropene	9.848	75	405881	101.74	ug/L	98
46) carbon tetrachloride	9.874	117	390352	103.54	ug/L	98
47) isopropyl acetate	10.031	87	67148	103.01	ug/L	98
49) methacrylonitrile	9.297	67	110982	100.72	ug/L	98
50) 1,1,1-trichloroethane	9.669	97	452070	104.21	ug/L	97
51) cyclohexane	9.748	84	469408	100.30	ug/L	# 83
52) iso-butyl alcohol	9.853	43	109273	896.35	ug/L	98
53) tert amyl alcohol	9.984	73	69415	456.98	ug/L	96
56) 2,2,4-trimethylpentane	10.110	57	994690	101.16	ug/L	99
57) n-butyl alcohol	10.603	56	359292	4300.05	ug/L	97
58) benzene	10.110	78	1217550	101.47	ug/L	98
59) tert-amyl methyl ether	10.141	73	939024	100.21	ug/L	99
60) heptane	10.278	57	230235	100.43	ug/L	99
61) 1,2-dichloroethane	10.126	62	354035	98.82	ug/L	99
62) ethyl acrylate	10.823	55	347138	98.62	ug/L	98
63) trichloroethene	10.823	95	294746	102.44	ug/L	99
64) 2-nitropropane	11.599	41	88836	93.34	ug/L	# 78
65) 2-chloroethyl vinyl ether	11.609	63	916978	499.41	ug/L	98
66) methyl methacrylate	11.090	100	76080	103.03	ug/L	96
67) 1,2-dichloropropane	11.090	63	320424	100.50	ug/L	98
68) methylcyclohexane	11.043	83	555781	102.37	ug/L	98
69) dibromomethane	11.248	93	169323	101.11	ug/L	98
70) bromodichloromethane	11.379	83	387167	102.17	ug/L	99
71) epichlorohydrin	11.735	57	130661	474.83	ug/L	98
72) cis-1,3-dichloropropene	11.829	75	509604	101.32	ug/L	99
73) 4-methyl-2-pentanone	11.919	58	427206	393.15	ug/L	96
74) 3-methyl-1-butanol	11.940	70	152448	1750.89	ug/L	98
77) toluene	12.191	92	754956	101.29	ug/L	98
78) ethyl methacrylate	12.375	69	367442	100.35	ug/L	99
79) trans-1,3-dichloropropene	12.385	75	440384	100.31	ug/L	98
80) 1,1,2-trichloroethane	12.600	83	210543	100.45	ug/L	97
81) tetrachloroethene	12.773	164	242348	101.68	ug/L	95
82) 2-hexanone	12.768	58	400059	383.04	ug/L	96
83) 1,3-dichloropropane	12.778	76	434860	99.29	ug/L	98
84) butyl acetate	12.841	56	192866	97.51	ug/L	95
85) dibromochloromethane	13.046	129	292568	104.48	ug/L	99
86) 1,2-dibromoethane	13.193	107	283551	101.95	ug/L	96
87) n-butyl ether	13.560	57	1373435	100.03	ug/L	99
88) chlorobenzene	13.649	112	806103	102.36	ug/L	98
89) 1,1,1,2-tetrachloroethane	13.712	131	293743	102.24	ug/L	99
90) ethylbenzene	13.707	91	1398332	101.97	ug/L	100
91) m,p-xylene	13.811	106	1095282	204.74	ug/L	99
92) o-xylene	14.226	91	1115744	100.42	ug/L	98
93) styrene	14.236	104	903721	102.14	ug/L	99
94) butyl acrylate	14.047	55	574048	100.41	ug/L	98
95) bromoform	14.498	173	182781	105.09	ug/L	95
96) isopropylbenzene	14.561	105	1394907	100.75	ug/L	100
97) cis-1,4-dichloro-2-butene	14.635	75	124848	99.10	ug/L	99
100) bromobenzene	14.960	156	336355	102.38	ug/L	91
101) 1,1,2,2-tetrachloroethane	14.870	83	322612	98.73	ug/L	99
102) trans-1,4-dichloro-2-b...	14.907	53	85168	99.28	ug/L	93
103) 1,2,3-trichloropropane	14.939	110	89810	99.57	ug/L	96
104) n-propylbenzene	14.970	91	1614256	100.31	ug/L	99
105) 2-chlorotoluene	15.117	126	331244	101.28	ug/L	97
106) 4-chlorotoluene	15.217	91	957472	100.78	ug/L	99
107) 1,3,5-trimethylbenzene	15.117	105	1171226	101.49	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156556.D
 Acq On : 9 Oct 2019 7:30 pm
 Operator : roberts
 Sample : ic6949-100
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 10 14:09:59 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

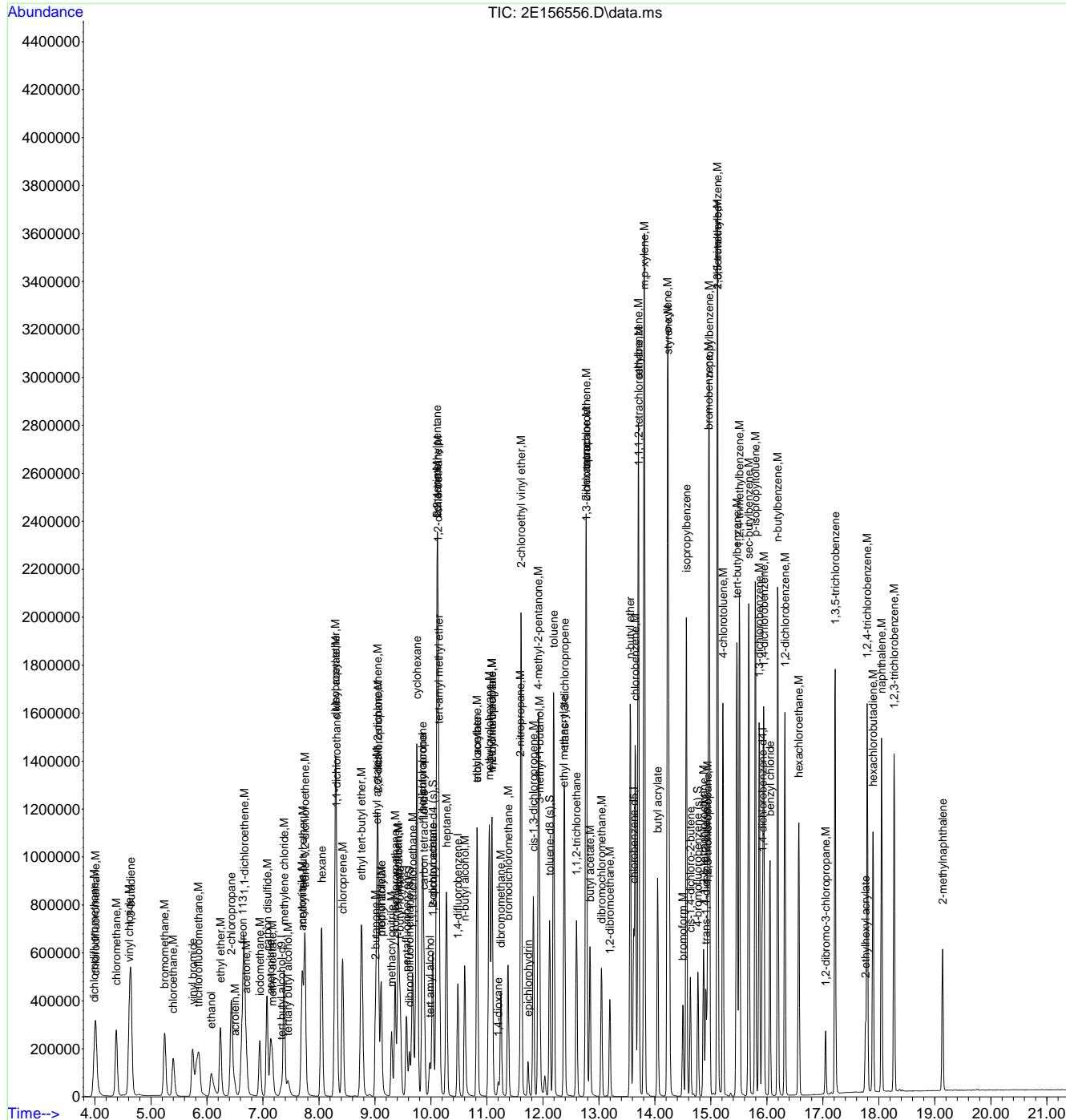
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.463	119	1017562	101.82	ug/L	99
109) 1,2,4-trimethylbenzene	15.510	105	1166463	100.74	ug/L	100
110) sec-butylbenzene	15.678	105	1508275	100.85	ug/L	99
111) 1,3-dichlorobenzene	15.861	146	634700	102.10	ug/L	99
112) p-isopropyltoluene	15.793	119	1283732	100.96	ug/L	100
113) 1,4-dichlorobenzene	15.945	146	650224	102.10	ug/L	99
114) 1,2-dichlorobenzene	16.323	146	626666	101.30	ug/L	98
115) n-butylbenzene	16.192	92	661090	100.86	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.046	157	73189	99.64	ug/L	97
117) 1,3,5-trichlorobenzene	17.219	180	542779	103.95	ug/L	98
118) 1,2,4-trichlorobenzene	17.791	180	485382	103.96	ug/L	97
119) 2-ethylhexyl acrylate	17.759	70	71907	21.62	ug/L	97
120) hexachlorobutadiene	17.896	225	230299	101.77	ug/L	98
121) naphthalene	18.048	128	1083142	100.58	ug/L	99
122) 1,2,3-trichlorobenzene	18.273	180	436810	101.70	ug/L	100
123) hexachloroethane	16.569	201	201700	105.97	ug/L	97
124) benzyl chloride	16.055	91	681751	99.89	ug/L	99
125) 2-methylnaphthalene	19.138	142	294411	51.89	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156556.D
Acq On : 9 Oct 2019 7:30 pm
Operator : roberts
Sample : ic6949-100
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 10 14:09:59 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156557.D
 Acq On : 9 Oct 2019 8:00 pm
 Operator : roberts
 Sample : ic6949-200
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 10 14:10:01 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.336	65	100086	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	286904	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	454429	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	387591	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	200683	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	128871	50.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.86%		
55) 1,2-dichloroethane-d4 (s)	10.036	65	133078	48.76	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	97.52%		
76) toluene-d8 (s)	12.118	98	524478	49.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.14%		
99) 4-bromofluorobenzene (s)	14.771	95	191271	48.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	97.88%		
Target Compounds						
				Qvalue		
2) ethanol	6.083	45	514702	19158.87	ug/L	97
3) tertiary butyl alcohol	7.452	59	277848	990.96	ug/L	98
4) 1,4-dioxane	11.200	88	108170	4726.21	ug/L	99
6) chlorodifluoromethane	4.017	51	894639	183.11	ug/L	99
7) dichlorodifluoromethane	3.996	85	735516	188.28	ug/L	100
8) chloromethane	4.384	50	936822	186.05	ug/L	99
9) vinyl chloride	4.615	62	972615	187.68	ug/L	98
10) bromomethane	5.244	94	553548	191.45	ug/L	98
11) chloroethane	5.402	64	490577	190.09	ug/L	98
12) trichlorofluoromethane	5.852	101	852885	193.02	ug/L	99
13) 1,3-butadiene	4.647	54	663677	188.97	ug/L	99
14) vinyl bromide	5.753	106	483359	198.80	ug/L	98
15) ethyl ether	6.246	74	359140	204.97	ug/L	97
16) 2-chloropropane	6.440	43	1055835	190.91	ug/L	99
17) acrolein	6.497	56	112303	197.63	ug/L	98
18) freon 113	6.639	151	466302	212.53	ug/L	99
19) 1,1-dichloroethene	6.670	61	879062	196.48	ug/L	97
20) acetone	6.707	43	578123	747.46	ug/L	96
21) acetonitrile	7.142	41	704235	1828.77	ug/L	99
22) iodomethane	6.948	142	737787	207.12	ug/L	96
23) carbon disulfide	7.074	76	1569363	198.69	ug/L	98
24) methylene chloride	7.378	84	599335	201.26	ug/L	98
25) methyl acetate	7.174	43	414409	195.22	ug/L	100
26) methyl tert butyl ether	7.708	73	1644107	196.89	ug/L	98
27) trans-1,2-dichloroethene	7.750	61	811195	195.59	ug/L	96
28) hexane	8.049	56	479396	200.69	ug/L	94
29) di-isopropyl ether	8.296	45	2132957	191.16	ug/L	94
30) ethyl tert-butyl ether	8.762	59	1897399	193.65	ug/L	98
31) 2-butanone	9.014	72	243983	761.31	ug/L	99
32) 1,1-dichloroethane	8.317	63	1056651	191.67	ug/L	99
33) chloroprene	8.422	53	891960	195.12	ug/L	98
34) acrylonitrile	7.698	53	208385	192.21	ug/L	97
35) vinyl acetate	8.296	86	128944	190.90	ug/L #	84
36) ethyl acetate	9.035	45	82156	181.12	ug/L #	47
37) 2,2-dichloropropane	9.056	77	861582	188.24	ug/L	98
38) cis-1,2-dichloroethene	9.051	96	647466	198.53	ug/L	96
39) propionitrile	9.114	54	752218	1844.45	ug/L	90
40) methyl acrylate	9.114	85	81449	200.67	ug/L	94
41) bromochloromethane	9.365	128	305811	203.21	ug/L	92
42) tetrahydrofuran	9.402	72	70034	188.64	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156557.D
 Acq On : 9 Oct 2019 8:00 pm
 Operator : roberts
 Sample : ic6949-200
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 10 14:10:01 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 07:42:35 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) chloroform	9.418	83	979077	197.18	ug/L	98
44) t-butyl formate	9.449	59	575497	191.04	ug/L	95
45) 1,1-dichloropropene	9.848	75	814610	196.21	ug/L	98
46) carbon tetrachloride	9.879	117	784282	199.88	ug/L	99
47) isopropyl acetate	10.031	87	137328	202.44	ug/L	96
49) methacrylonitrile	9.297	67	226879	197.84	ug/L	97
50) 1,1,1-trichloroethane	9.675	97	898651	199.06	ug/L	98
51) cyclohexane	9.748	84	949214	194.88	ug/L #	88
52) iso-butyl alcohol	9.853	43	223365	1760.56	ug/L	96
53) tert amyl alcohol	9.984	73	138164	874.01	ug/L	97
56) 2,2,4-trimethylpentane	10.110	57	2077213	203.57	ug/L	98
57) n-butyl alcohol	10.608	56	733083	8454.40	ug/L	97
58) benzene	10.115	78	2434274	195.49	ug/L	98
59) tert-amyl methyl ether	10.147	73	1873487	192.65	ug/L	99
60) heptane	10.278	57	481268	202.30	ug/L	100
61) 1,2-dichloroethane	10.126	62	699052	188.02	ug/L	99
62) ethyl acrylate	10.823	55	712203	194.97	ug/L	98
63) trichloroethene	10.828	95	594173	198.99	ug/L	97
64) 2-nitropropane	11.594	41	179640	181.89	ug/L #	27
65) 2-chloroethyl vinyl ether	11.615	63	1853942	972.96	ug/L	97
66) methyl methacrylate	11.090	100	158747	207.16	ug/L #	88
67) 1,2-dichloropropane	11.090	63	643572	194.51	ug/L	98
68) methylcyclohexane	11.043	83	1150819	204.25	ug/L	98
69) dibromomethane	11.248	93	346318	199.27	ug/L	98
70) bromodichloromethane	11.379	83	789298	200.71	ug/L	100
71) epichlorohydrin	11.735	57	272586	954.55	ug/L	97
72) cis-1,3-dichloropropene	11.829	75	1037773	198.83	ug/L	98
73) 4-methyl-2-pentanone	11.924	58	858058	760.92	ug/L	94
74) 3-methyl-1-butanol	11.940	70	301862	3340.79	ug/L	97
77) toluene	12.191	92	1532172	195.42	ug/L	98
78) ethyl methacrylate	12.375	69	754887	195.97	ug/L	99
79) trans-1,3-dichloropropene	12.385	75	890284	192.76	ug/L	97
80) 1,1,2-trichloroethane	12.600	83	428485	194.34	ug/L	98
81) tetrachloroethene	12.773	164	494090	197.07	ug/L	97
82) 2-hexanone	12.768	58	798025	726.32	ug/L	95
83) 1,3-dichloropropane	12.784	76	875810	190.08	ug/L	99
84) butyl acetate	12.841	56	392915	188.84	ug/L	93
85) dibromochloromethane	13.046	129	602213	204.43	ug/L	97
86) 1,2-dibromoethane	13.198	107	575712	196.76	ug/L	95
87) n-butyl ether	13.560	57	2778936	192.40	ug/L	99
88) chlorobenzene	13.654	112	1653099	199.55	ug/L	100
89) 1,1,1,2-tetrachloroethane	13.712	131	608423	201.31	ug/L	99
90) ethylbenzene	13.707	91	2811043	194.87	ug/L	99
91) m,p-xylene	13.811	106	2212303	393.11	ug/L	98
92) o-xylene	14.226	91	2257562	193.14	ug/L	98
93) styrene	14.236	104	1846711	198.41	ug/L	99
94) butyl acrylate	14.047	55	1175799	195.51	ug/L	98
95) bromoform	14.503	173	387561	211.82	ug/L	97
96) isopropylbenzene	14.561	105	2843154	195.21	ug/L	99
97) cis-1,4-dichloro-2-butene	14.635	75	263417	198.77	ug/L	99
100) bromobenzene	14.960	156	698549	199.24	ug/L	95
101) 1,1,2,2-tetrachloroethane	14.870	83	669133	191.89	ug/L	100
102) trans-1,4-dichloro-2-b...	14.907	53	176978	193.31	ug/L	95
103) 1,2,3-trichloropropane	14.944	110	187444	194.74	ug/L	97
104) n-propylbenzene	14.970	91	3283129	191.17	ug/L	99
105) 2-chlorotoluene	15.117	126	682902	195.65	ug/L	96
106) 4-chlorotoluene	15.217	91	1973868	194.67	ug/L	99
107) 1,3,5-trimethylbenzene	15.122	105	2395490	194.51	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156557.D
 Acq On : 9 Oct 2019 8:00 pm
 Operator : roberts
 Sample : ic6949-200
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 10 14:10:01 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 07:42:35 2019

Response via : Initial Calibration

7.6.10

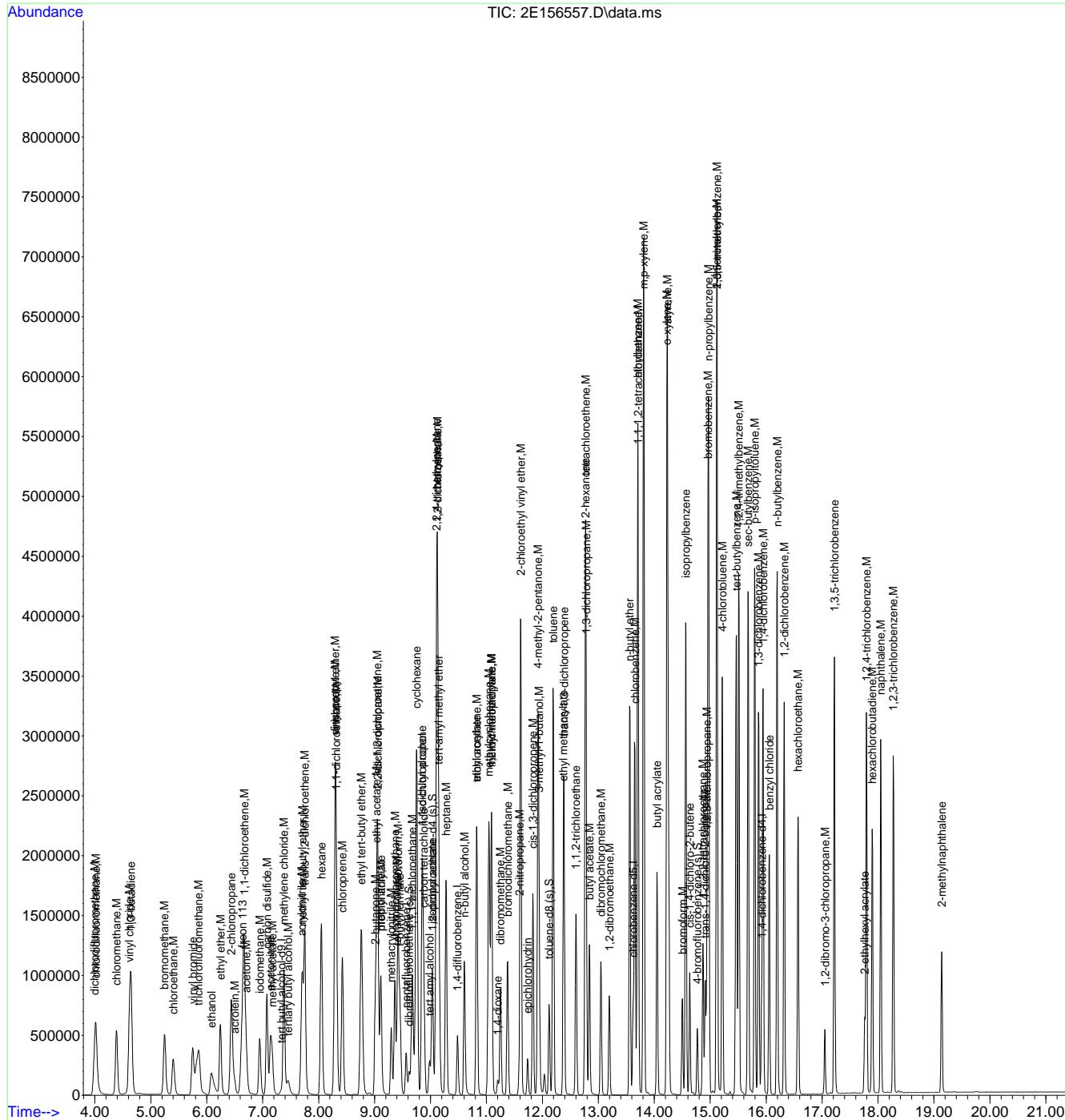
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) tert-butylbenzene	15.468	119	2122314	198.99	ug/L	96
109) 1,2,4-trimethylbenzene	15.510	105	2407029	194.78	ug/L	100
110) sec-butylbenzene	15.678	105	3097834	194.09	ug/L	99
111) 1,3-dichlorobenzene	15.861	146	1336546	201.46	ug/L	99
112) p-isopropyltoluene	15.793	119	2648914	195.21	ug/L	100
113) 1,4-dichlorobenzene	15.945	146	1369598	201.52	ug/L	99
114) 1,2-dichlorobenzene	16.323	146	1316710	199.44	ug/L	99
115) n-butylbenzene	16.197	92	1371830	196.12	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.052	157	153467	195.78	ug/L	98
117) 1,3,5-trichlorobenzene	17.219	180	1113101	199.76	ug/L	98
118) 1,2,4-trichlorobenzene	17.796	180	990678	198.82	ug/L	98
119) 2-ethylhexyl acrylate	17.759	70	159934	45.06	ug/L	99
120) hexachlorobutadiene	17.896	225	475012	196.70	ug/L	98
121) naphthalene	18.048	128	2185714	190.18	ug/L	100
122) 1,2,3-trichlorobenzene	18.273	180	890785	194.34	ug/L	99
123) hexachloroethane	16.569	201	430870	212.12	ug/L	97
124) benzyl chloride	16.055	91	1425194	195.67	ug/L	99
125) 2-methylnaphthalene	19.138	142	606761	100.21	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156557.D
Acq On : 9 Oct 2019 8:00 pm
Operator : roberts
Sample : ic6949-200
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 10 14:10:01 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 07:42:35 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156560.D
 Acq On : 9 Oct 2019 9:32 pm
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 10 15:09:43 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 15:09:10 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.331	65	109844	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	289882	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	453356	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	380771	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	194846	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.612	113	129710	50.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.12%		
55) 1,2-dichloroethane-d4 (s)	10.036	65	134787	49.41	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	98.82%		
76) toluene-d8 (s)	12.118	98	516465	49.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.22%		
99) 4-bromofluorobenzene (s)	14.766	95	188496	49.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.22%		
<hr/>						
Target Compounds				Qvalue		
2) ethanol	6.078	45	155963	5218.81	ug/L	97
3) tertiary butyl alcohol	7.441	59	85832	293.01	ug/L	97
4) 1,4-dioxane	11.200	88	32068	1316.75	ug/L	99
6) chlorodifluoromethane	4.007	51	265575	54.41	ug/L	99
7) dichlorodifluoromethane	3.986	85	226169	61.31	ug/L	98
8) chloromethane	4.379	50	320027	62.85	ug/L	99
9) vinyl chloride	4.610	62	257812	51.39	ug/L	98
10) bromomethane	5.244	94	192054	64.68	ug/L	98
11) chloroethane	5.396	64	127708	49.22	ug/L	97
12) trichlorofluoromethane	5.847	101	242535	57.78	ug/L	97
13) 1,3-butadiene	4.641	54	229382	67.57	ug/L	99
14) vinyl bromide	5.742	106	137219	56.58	ug/L	100
15) ethyl ether	6.241	74	97683	53.82	ug/L	98
16) 2-chloropropane	6.435	43	310151	54.38	ug/L	98
17) acrolein	6.492	56	28509	49.42	ug/L	94
18) freon 113	6.634	151	129283	59.42	ug/L	96
19) 1,1-dichloroethene	6.665	61	232935	52.22	ug/L	99
20) acetone	6.702	43	213127	254.26	ug/L	98
22) iodomethane	6.943	142	259284	71.82	ug/L	98
23) carbon disulfide	7.074	76	532009	66.59	ug/L	98
24) methylene chloride	7.378	84	164989	51.72	ug/L	97
25) methyl acetate	7.169	43	105886	49.62	ug/L	99
26) methyl tert butyl ether	7.703	73	897835	103.65	ug/L	96
27) trans-1,2-dichloroethene	7.751	61	226979	54.68	ug/L	97
28) hexane	8.049	56	130673	57.36	ug/L	93
29) di-isopropyl ether	8.296	45	574183	51.36	ug/L	100
30) ethyl tert-butyl ether	8.757	59	527317	54.24	ug/L	99
31) 2-butanone	9.009	72	78716	265.87	ug/L	# 85
32) 1,1-dichloroethane	8.312	63	300893	54.28	ug/L	100
33) chloroprene	8.422	53	256815	56.71	ug/L	98
35) vinyl acetate	8.301	86	31712	51.43	ug/L	# 89
36) ethyl acetate	9.035	45	22675	47.11	ug/L	# 77
37) 2,2-dichloropropane	9.051	77	237218	49.41	ug/L	99
38) cis-1,2-dichloroethene	9.051	96	174048	51.39	ug/L	95
39) propionitrile	9.108	54	220533	566.06	ug/L	99
40) methyl acrylate	9.114	85	22327	56.94	ug/L	95
41) bromochloromethane	9.360	128	84137	54.54	ug/L	96
42) tetrahydrofuran	9.402	72	19993	51.96	ug/L	92
43) chloroform	9.413	83	270720	52.33	ug/L	100
44) t-butyl formate	9.444	59	112584	37.52	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156560.D
 Acq On : 9 Oct 2019 9:32 pm
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 10 15:09:43 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 15:09:10 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
45) 1,1-dichloropropene	9.848	75	223566	53.92	ug/L	98
46) carbon tetrachloride	9.874	117	215497	54.88	ug/L	98
47) isopropyl acetate	10.031	87	35230	52.07	ug/L #	91
49) methacrylonitrile	9.297	67	63501	58.42	ug/L	98
50) 1,1,1-trichloroethane	9.669	97	243717	52.94	ug/L	97
51) cyclohexane	9.743	84	268518	57.07	ug/L	99
52) iso-butyl alcohol	9.853	43	64119	521.45	ug/L	98
53) tert amyl alcohol	9.979	73	40249	249.26	ug/L	97
56) 2,2,4-trimethylpentane	10.105	57	634835	65.47	ug/L	99
57) n-butyl alcohol	10.603	56	212862	2710.61	ug/L	98
58) benzene	10.110	78	669718	51.65	ug/L	98
59) tert-amyl methyl ether	10.141	73	499459	49.90	ug/L	99
60) heptane	10.278	57	149726	67.56	ug/L	98
61) 1,2-dichloroethane	10.126	62	192547	50.35	ug/L	99
62) ethyl acrylate	10.823	55	186856	54.80	ug/L	99
63) trichloroethene	10.823	95	164388	54.57	ug/L	100
64) 2-nitropropane	11.599	41	53656	57.55	ug/L #	78
65) 2-chloroethyl vinyl ether	11.609	63	541898	300.93	ug/L	99
66) methyl methacrylate	11.090	100	42291	57.78	ug/L	94
67) 1,2-dichloropropane	11.085	63	174831	53.23	ug/L	96
68) methylcyclohexane	11.043	83	295446	55.01	ug/L	99
69) dibromomethane	11.248	93	91928	53.41	ug/L	97
70) bromodichloromethane	11.373	83	205479	53.52	ug/L	99
71) epichlorohydrin	11.735	57	77577	284.16	ug/L	99
72) cis-1,3-dichloropropene	11.830	75	277973	55.40	ug/L	98
73) 4-methyl-2-pentanone	11.924	58	236600	224.42	ug/L	97
74) 3-methyl-1-butanol	11.940	70	88168	1078.60	ug/L	97
77) toluene	12.191	92	413057	53.18	ug/L	100
78) ethyl methacrylate	12.375	69	204228	58.93	ug/L	100
79) trans-1,3-dichloropropene	12.385	75	244510	57.11	ug/L	99
80) 1,1,2-trichloroethane	12.600	83	113380	52.63	ug/L	95
82) 2-hexanone	12.768	58	234683	247.21	ug/L	100
83) 1,3-dichloropropane	12.779	76	240560	53.04	ug/L	99
84) butyl acetate	12.842	56	106108	54.84	ug/L	95
85) dibromochloromethane	13.046	129	158486	57.01	ug/L	97
86) 1,2-dibromoethane	13.193	107	153789	55.87	ug/L	96
87) n-butyl ether	13.560	57	768343	56.80	ug/L	99
88) chlorobenzene	13.649	112	444845	54.70	ug/L	99
89) 1,1,1,2-tetrachloroethane	13.712	131	160142	55.19	ug/L	99
90) ethylbenzene	13.707	91	757327	53.68	ug/L	99
91) m,p-xylene	13.811	106	597718	109.20	ug/L	100
92) o-xylene	14.226	91	607660	53.39	ug/L	98
93) styrene	14.236	104	489268	57.67	ug/L	98
94) butyl acrylate	14.047	55	307417	59.13	ug/L	99
95) bromoform	14.498	173	104536	61.91	ug/L	98
96) isopropylbenzene	14.561	105	760977	54.42	ug/L	99
97) cis-1,4-dichloro-2-butene	14.635	75	67452	56.17	ug/L	97
100) bromobenzene	14.960	156	183817	53.88	ug/L	96
101) 1,1,2,2-tetrachloroethane	14.871	83	174620	53.17	ug/L	99
102) trans-1,4-dichloro-2-b...	14.907	53	47207	55.42	ug/L	96
103) 1,2,3-trichloropropane	14.939	110	50034	52.23	ug/L	98
104) n-propylbenzene	14.970	91	886807	53.49	ug/L	100
105) 2-chlorotoluene	15.117	126	179019	52.10	ug/L	96
106) 4-chlorotoluene	15.217	91	530225	53.01	ug/L	99
107) 1,3,5-trimethylbenzene	15.117	105	635499	53.70	ug/L	98
108) tert-butylbenzene	15.463	119	554159	54.51	ug/L	98
109) 1,2,4-trimethylbenzene	15.510	105	639635	54.45	ug/L	100
110) sec-butylbenzene	15.678	105	819463	54.27	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156560.D
 Acq On : 9 Oct 2019 9:32 pm
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 10 15:09:43 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 15:09:10 2019
 Response via : Initial Calibration

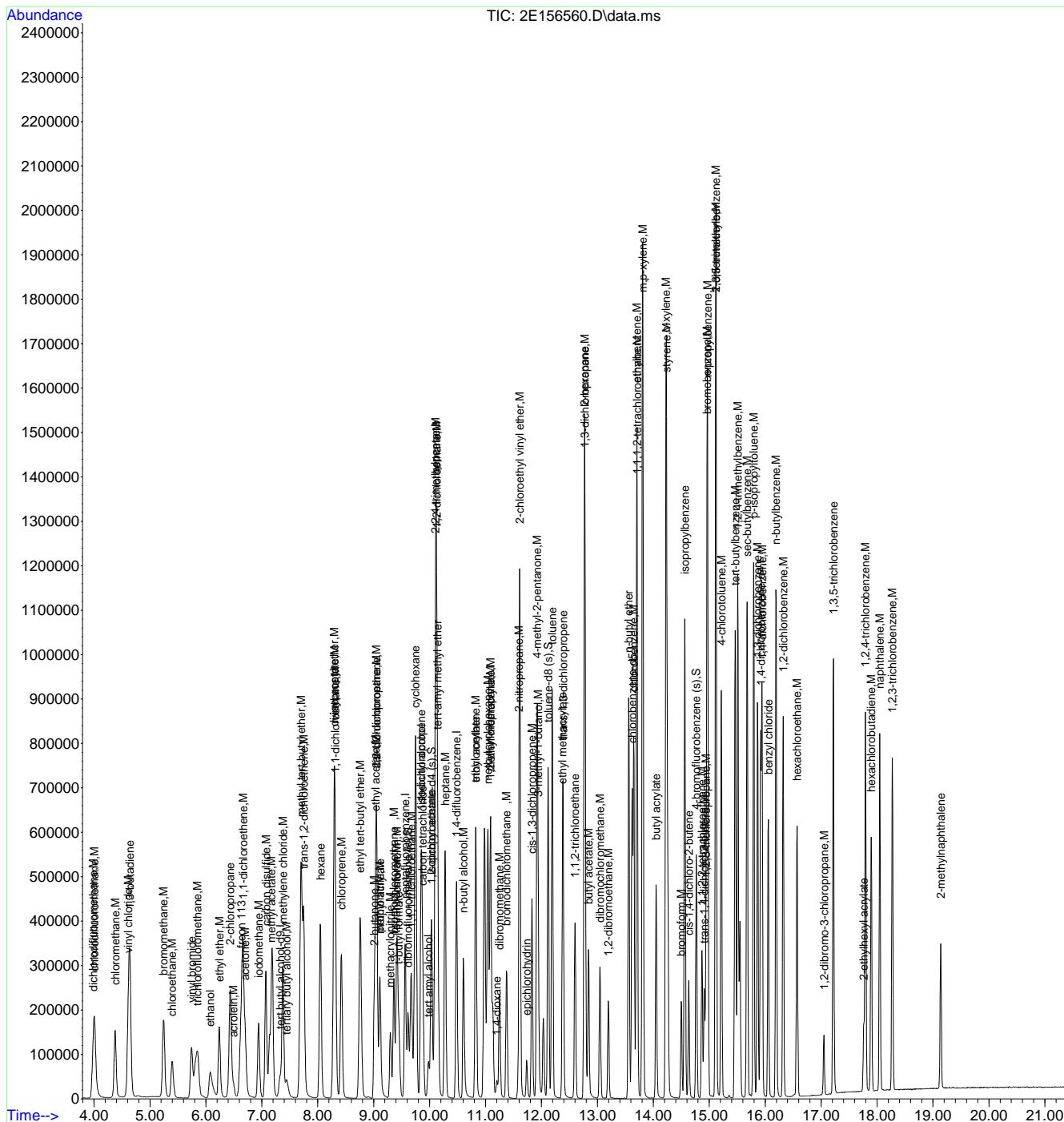
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,3-dichlorobenzene	15.861	146	352900	53.88	ug/L	100
112) p-isopropyltoluene	15.793	119	706927	55.13	ug/L	99
113) 1,4-dichlorobenzene	15.945	146	356852	53.71	ug/L	100
114) 1,2-dichlorobenzene	16.323	146	343575	52.75	ug/L	98
115) n-butylbenzene	16.192	92	354364	54.28	ug/L	99
116) 1,2-dibromo-3-chloropr...	17.052	157	38505	52.15	ug/L	96
117) 1,3,5-trichlorobenzene	17.219	180	297008	55.57	ug/L	98
118) 1,2,4-trichlorobenzene	17.791	180	254541	53.58	ug/L	98
119) 2-ethylhexyl acrylate	17.759	70	38079	11.31	ug/L	100
120) hexachlorobutadiene	17.896	225	122871	54.32	ug/L	99
121) naphthalene	18.048	128	587838	55.45	ug/L	99
122) 1,2,3-trichlorobenzene	18.273	180	232967	53.04	ug/L	100
123) hexachloroethane	16.569	201	108594	58.02	ug/L	96
124) benzyl chloride	16.055	91	442581	64.06	ug/L	100
125) 2-methylnaphthalene	19.138	142	164920	29.39	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156560.D
Acq On : 9 Oct 2019 9:32 pm
Operator : roberts
Sample : icv6949-50
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Oct 10 15:09:43 2019
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Thu Oct 10 15:09:10 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156561.D
 Acq On : 9 Oct 2019 10:02 pm
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 10 14:38:09 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 14:35:42 2019
 Response via : Initial Calibration

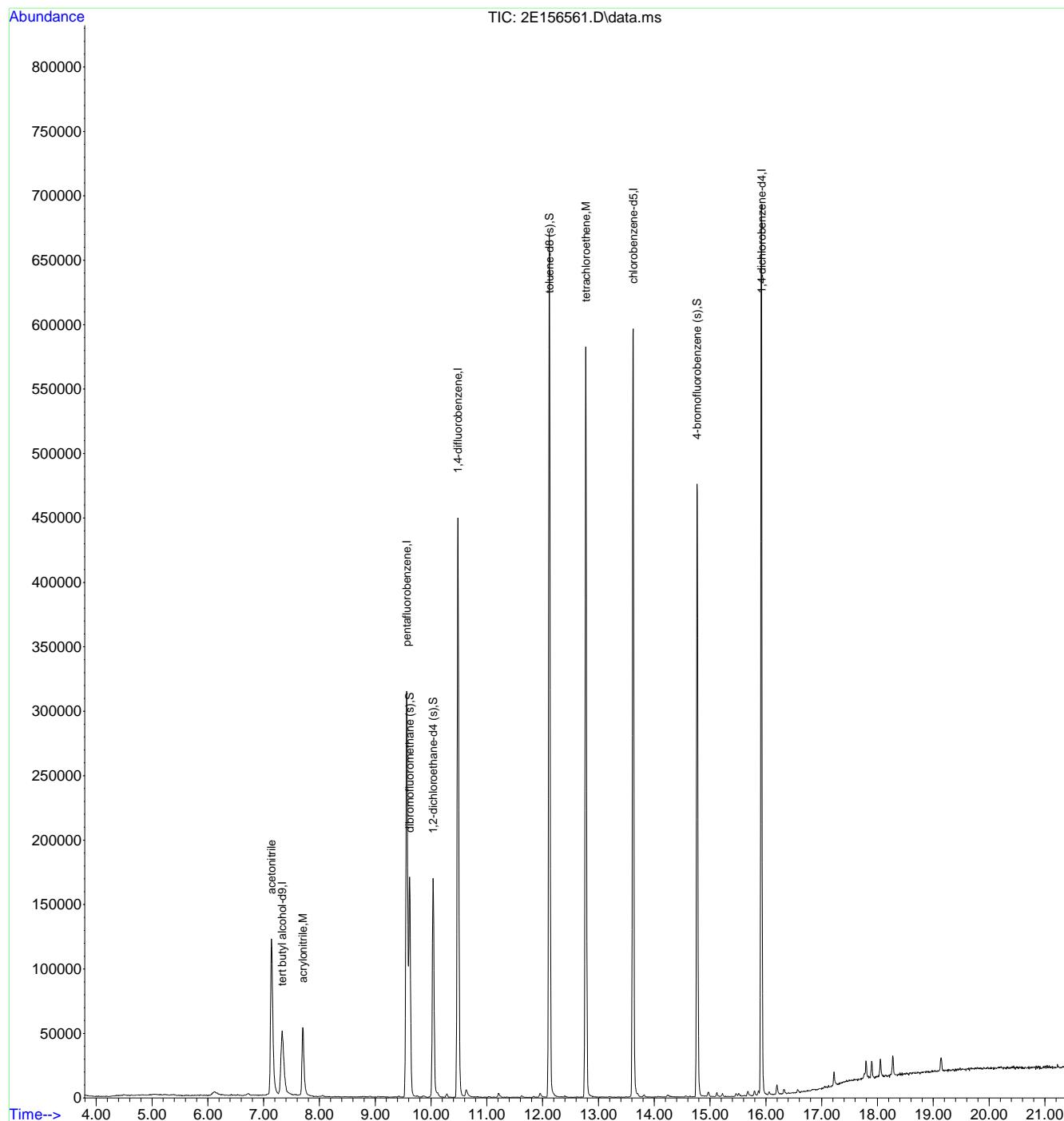
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.331	65	110328	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	262549	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	413438	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	346092	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	170964	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	117269	50.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.94%		
55) 1,2-dichloroethane-d4 (s)	10.037	65	127722	51.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	102.68%		
76) toluene-d8 (s)	12.118	98	471196	49.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.58%		
99) 4-bromofluorobenzene (s)	14.766	95	170092	51.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	102.04%		
<hr/>						
Target Compounds						
21) acetonitrile	7.142	41	193856	543.86	ug/L	99
34) acrylonitrile	7.703	53	56387	57.36	ug/L	100
81) tetrachloroethene	12.773	164	143009	63.97	ug/L	94
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156561.D
 Acq On : 9 Oct 2019 10:02 pm
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Oct 10 14:38:09 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 14:35:42 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156566.D
 Acq On : 10 Oct 2019 11:06 am
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:38:58 2019
 Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Thu Oct 10 14:35:42 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.331	65	96273	500.00	ug/L	0.00
5) pentafluorobenzene	9.565	168	248750	50.00	ug/L	0.00
54) 1,4-difluorobenzene	10.482	114	394783	50.00	ug/L	0.00
75) chlorobenzene-d5	13.623	117	337161	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.919	152	173549	50.00	ug/L	0.00
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.617	113	113251	51.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 102.90%		
55) 1,2-dichloroethane-d4 (s)	10.037	65	124698	52.49	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 104.98%		
76) toluene-d8 (s)	12.118	98	452536	48.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 97.18%		
99) 4-bromofluorobenzene (s)	14.766	95	168603	49.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.64%		
Target Compounds						
				Qvalue		
2) ethanol	6.083	45	144900	5532.10	ug/L	98
3) tertiary butyl alcohol	7.447	59	70848	275.95	ug/L	98
4) 1,4-dioxane	11.206	88	29125	1364.49	ug/L	98
6) chlorodifluoromethane	4.012	51	189744	45.30	ug/L	95
13) 1,3-butadiene	4.642	54	158645	54.46	ug/L	99
15) ethyl ether	6.241	74	70756	45.43	ug/L	97
16) 2-chloropropane	6.440	43	234647	47.94	ug/L	99
18) freon 113	6.634	151	96132	51.49	ug/L	98
19) 1,1-dichloroethene	6.665	61	173594	45.35	ug/L	99
20) acetone	6.707	43	161040	223.89	ug/L	97
22) iodomethane	6.943	142	182659	58.96	ug/L	97
23) carbon disulfide	7.074	76	378782	55.25	ug/L	99
24) methylene chloride	7.378	84	122973	44.93	ug/L	98
25) methyl acetate	7.169	43	80073	43.72	ug/L	99
26) methyl tert butyl ether	7.709	73	673070	90.55	ug/L	99
27) trans-1,2-dichloroethene	7.751	61	172732	48.49	ug/L	98
29) di-isopropyl ether	8.291	45	449527	46.86	ug/L	95
30) ethyl tert-butyl ether	8.763	59	407159	48.81	ug/L	99
31) 2-butanone	9.014	72	58795	231.42	ug/L	99
32) 1,1-dichloroethane	8.317	63	229979	48.35	ug/L	99
33) chloroprene	8.422	53	195300	50.26	ug/L	98
35) vinyl acetate	8.301	86	26248	49.61	ug/L	100
36) ethyl acetate	9.035	45	17456	42.26	ug/L #	79
37) 2,2-dichloropropane	9.051	77	194619	47.24	ug/L	99
38) cis-1,2-dichloroethene	9.051	96	131825	45.36	ug/L	96
39) propionitrile	9.109	54	173622	519.34	ug/L	98
40) methyl acrylate	9.114	85	16870	50.14	ug/L	100
41) bromochloromethane	9.366	128	62279	47.05	ug/L	93
42) tetrahydrofuran	9.407	72	15388	46.60	ug/L	93
43) chloroform	9.413	83	209859	47.28	ug/L	97
44) t-butyl formate	9.449	59	95079	36.92	ug/L	96
45) 1,1-dichloropropene	9.848	75	173500	48.76	ug/L	99
46) carbon tetrachloride	9.874	117	164713	48.88	ug/L	97
47) isopropyl acetate	10.031	87	26640	45.88	ug/L	98
49) methacrylonitrile	9.303	67	48258	51.73	ug/L	96
50) 1,1,1-trichloroethane	9.670	97	184394	46.67	ug/L	99
52) iso-butyl alcohol	9.853	43	53146	503.68	ug/L	94
53) tert amyl alcohol	9.979	73	32409	233.89	ug/L	91
56) 2,2,4-trimethylpentane	10.105	57	546723	64.75	ug/L	99
57) n-butyl alcohol	10.603	56	181296	2651.17	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156566.D
 Acq On : 10 Oct 2019 11:06 am
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:38:58 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 14:35:42 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
58) benzene	10.110	78	513278	45.46	ug/L	100
59) tert-amyl methyl ether	10.142	73	386276	44.32	ug/L	99
60) heptane	10.278	57	132312	68.56	ug/L	99
61) 1,2-dichloroethane	10.126	62	150219	45.11	ug/L	100
62) ethyl acrylate	10.823	55	144524	48.68	ug/L	99
63) trichloroethene	10.823	95	125376	47.80	ug/L	99
64) 2-nitropropane	11.599	41	43174	53.17	ug/L	#
65) 2-chloroethyl vinyl ether	11.610	63	432301	275.69	ug/L	99
66) methyl methacrylate	11.090	100	32498	50.98	ug/L	98
67) 1,2-dichloropropane	11.090	63	138172	48.31	ug/L	99
68) methylcyclohexane	11.043	83	236408	50.55	ug/L	97
69) dibromomethane	11.248	93	70835	47.26	ug/L	98
70) bromodichloromethane	11.379	83	161059	48.18	ug/L	98
71) epichlorohydrin	11.735	57	63206	265.87	ug/L	99
72) cis-1,3-dichloropropene	11.830	75	219051	50.13	ug/L	99
73) 4-methyl-2-pentanone	11.919	58	184926	201.43	ug/L	100
74) 3-methyl-1-butanol	11.940	70	69574	977.41	ug/L	96
77) toluene	12.192	92	316210	45.98	ug/L	99
78) ethyl methacrylate	12.375	69	160647	52.35	ug/L	98
79) trans-1,3-dichloropropene	12.386	75	194076	51.19	ug/L	98
80) 1,1,2-trichloroethane	12.600	83	91096	47.75	ug/L	99
82) 2-hexanone	12.768	58	184265	219.20	ug/L	99
83) 1,3-dichloropropane	12.784	76	189760	47.25	ug/L	98
84) butyl acetate	12.842	56	84245	49.18	ug/L	93
85) dibromochloromethane	13.046	129	124421	50.54	ug/L	96
86) 1,2-dibromoethane	13.198	107	105886	43.44	ug/L	98
87) n-butyl ether	13.560	57	613774	51.24	ug/L	100
88) chlorobenzene	13.649	112	346860	48.17	ug/L	97
89) 1,1,1,2-tetrachloroethane	13.707	131	125369	48.79	ug/L	97
90) ethylbenzene	13.702	91	593218	47.49	ug/L	99
91) m,p-xylene	13.812	106	466073	96.16	ug/L	99
92) o-xylene	14.226	91	480081	47.64	ug/L	99
93) styrene	14.236	104	381829	50.82	ug/L	99
94) butyl acrylate	14.048	55	244963	53.21	ug/L	99
95) bromoform	14.498	173	81248	54.34	ug/L	97
96) isopropylbenzene	14.561	105	601167	48.55	ug/L	100
97) cis-1,4-dichloro-2-butene	14.635	75	55552	52.24	ug/L	98
100) bromobenzene	14.960	156	143337	47.17	ug/L	96
101) 1,1,2,2-tetrachloroethane	14.865	83	142105	48.58	ug/L	99
102) trans-1,4-dichloro-2-b...	14.907	53	39147	51.60	ug/L	98
103) 1,2,3-trichloropropane	14.944	110	38152	44.71	ug/L	94
104) n-propylbenzene	14.970	91	716739	48.53	ug/L	99
105) 2-chlorotoluene	15.117	126	141533	46.25	ug/L	98
106) 4-chlorotoluene	15.212	91	425137	47.72	ug/L	97
107) 1,3,5-trimethylbenzene	15.117	105	498257	47.27	ug/L	99
108) tert-butylbenzene	15.463	119	436721	48.23	ug/L	99
109) 1,2,4-trimethylbenzene	15.510	105	515971	49.31	ug/L	99
110) sec-butylbenzene	15.678	105	655612	48.74	ug/L	100
111) 1,3-dichlorobenzene	15.862	146	278661	47.76	ug/L	99
112) p-isopropyltoluene	15.793	119	561439	49.16	ug/L	99
113) 1,4-dichlorobenzene	15.946	146	283596	47.92	ug/L	100
114) 1,2-dichlorobenzene	16.323	146	274302	47.28	ug/L	99
115) n-butylbenzene	16.192	92	291453	50.12	ug/L	100
116) 1,2-dibromo-3-chloropr...	17.052	157	30460	46.31	ug/L	99
117) 1,3,5-trichlorobenzene	17.220	180	238209	50.04	ug/L	97
118) 1,2,4-trichlorobenzene	17.791	180	205503	48.56	ug/L	99
119) 2-ethylhexyl acrylate	17.760	70	30558	10.19	ug/L	98
120) hexachlorobutadiene	17.896	225	98589	48.93	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
 Data File : 2E156566.D
 Acq On : 10 Oct 2019 11:06 am
 Operator : roberts
 Sample : icv6949-50
 Misc : MS37796,V2E6949,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:38:58 2019

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

QLast Update : Thu Oct 10 14:35:42 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
121) naphthalene	18.048	128	469783	49.75	ug/L	99
122) 1,2,3-trichlorobenzene	18.273	180	185870	47.51	ug/L	98
123) hexachloroethane	16.569	201	85181	51.10	ug/L	97
124) benzyl chloride	16.056	91	399159	64.86	ug/L	99
125) 2-methylnaphthalene	19.139	142	129818	25.97	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\V2E6949\
Data File : 2E156566.D
Acq On : 10 Oct 2019 11:06 am
Operator : roberts
Sample : icv6949-50
Misc : MS37796,V2E6949,5,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 10 14:38:58 2019

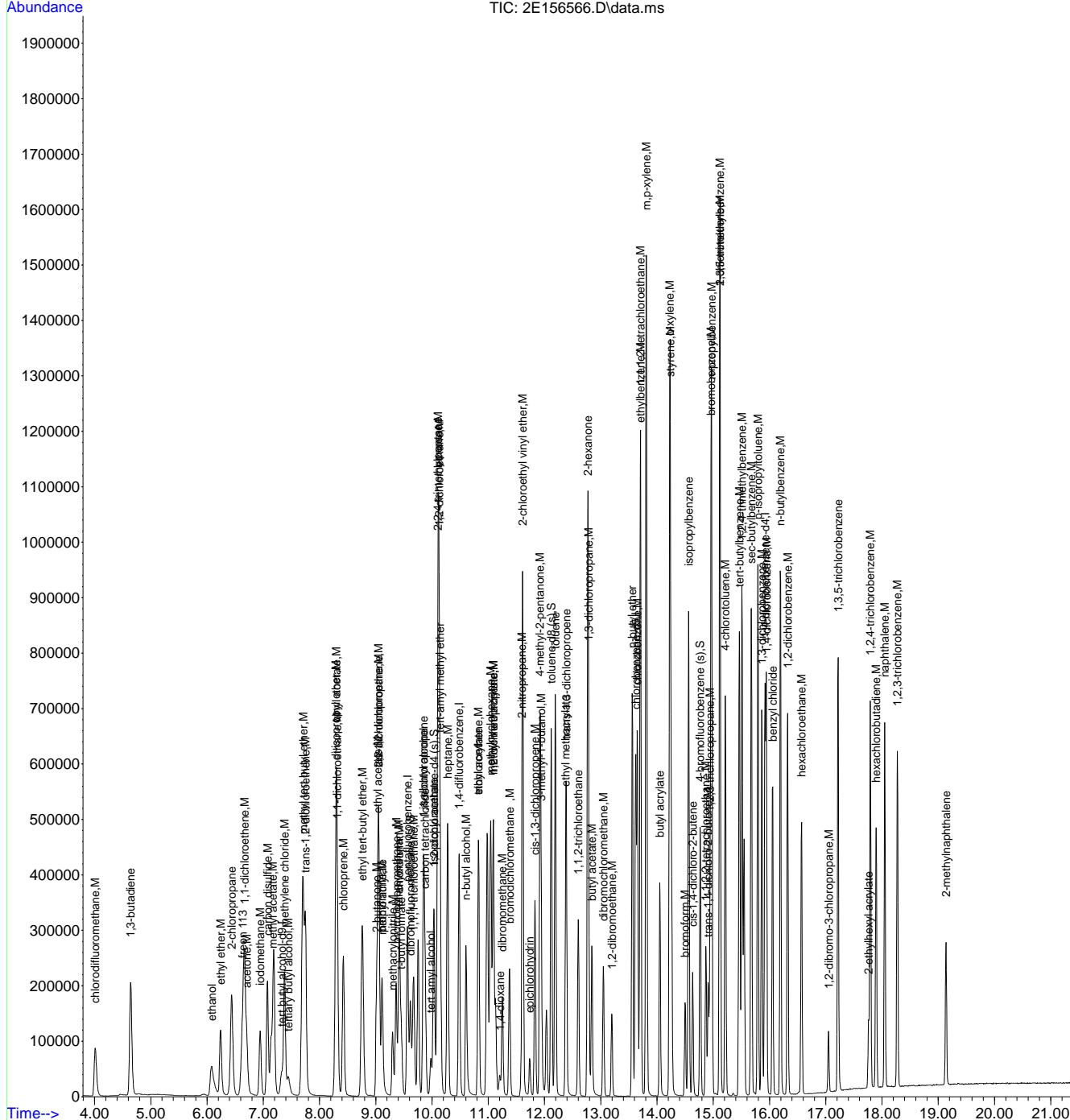
Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M

Quant Method SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM

OLast Update : Thu Oct 10 14:35:42 2019

Response via : Initial Calibration

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159597.d
 Acq On : 18 Feb 2020 7:21 am
 Operator : edwardd
 Sample : cc6949-20 Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:38:05 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.321	65	124708	500.00	ug/L	-0.02
5) pentafluorobenzene	9.554	168	291067	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	451904	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	377354	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	188941	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	291067	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	134753	52.32	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	104.64%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	147326	54.18	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.36%	
76) toluene-d8 (s)	12.107	98	486705	46.70	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.40%	
99) 4-bromofluorobenzene (s)	14.755	95	181659	49.30	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.60%	
Target Compounds						
				Qvalue		
2) ethanol	6.078	45	57345	1690.16	ug/L	90
3) tertiary butyl alcohol	7.446	59	35660	107.22	ug/L	95
4) 1,4-dioxane	11.190	88	13911	503.12	ug/L	92
6) chlorodifluoromethane	4.012	51	91800	18.73	ug/L	95
7) dichlorodifluoromethane	3.986	85	93249	25.18	ug/L	98
8) chloromethane	4.384	50	86942	17.00	ug/L	98
9) vinyl chloride	4.615	62	91390	18.14	ug/L	97
10) bromomethane	5.250	94	61308	20.56	ug/L	95
11) chloroethane	5.402	64	50670	19.45	ug/L	97
12) trichlorofluoromethane	5.853	101	103483	24.55	ug/L	93
13) 1,3-butadiene	4.652	54	68197	20.01	ug/L	96
14) vinyl bromide	5.748	106	53434	21.94	ug/L	96
15) ethyl ether	6.240	74	36593	20.08	ug/L	93
16) 2-chloropropane	6.429	43	112784	19.69	ug/L	87
17) acrolein	6.492	56	11460	19.79	ug/L	91
18) freon 113	6.628	151	52602	24.08	ug/L	94
19) 1,1-dichloroethene	6.660	61	97227	21.71	ug/L	98
20) acetone	6.702	43	61547	73.13	ug/L	100
21) acetonitrile	7.137	41	78491	198.63	ug/L	99
22) iodomethane	6.938	142	80341	22.16	ug/L	97
23) carbon disulfide	7.064	76	172750	21.53	ug/L	97
24) methylene chloride	7.368	84	66803	20.86	ug/L	90
25) methyl acetate	7.163	43	44657	20.84	ug/L	99
26) methyl tert butyl ether	7.698	73	169840	19.53	ug/L	97
27) trans-1,2-dichloroethene	7.745	61	90571	21.73	ug/L	99
28) hexane	8.044	56	53054	23.20	ug/L	92
29) di-isopropyl ether	8.285	45	218378	19.45	ug/L	98
30) ethyl tert-butyl ether	8.752	59	199984	20.49	ug/L	98
31) 2-butanone	9.009	72	25673	86.36	ug/L	93
32) 1,1-dichloroethane	8.306	63	118994	21.38	ug/L	97
33) chloroprene	8.411	53	96945	21.32	ug/L	96
34) acrylonitrile	7.688	53	22602	20.74	ug/L	97
35) vinyl acetate	8.291	86	14759	23.84	ug/L #	72
36) ethyl acetate	9.025	45	9170	18.97	ug/L #	90
37) 2,2-dichloropropane	9.040	77	98197	20.37	ug/L	98
38) cis-1,2-dichloroethene	9.040	96	71235	20.95	ug/L	94
39) propionitrile	9.103	54	72264	184.73	ug/L	97
40) methyl acrylate	9.114	85	8604	21.86	ug/L #	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159597.d
 Acq On : 18 Feb 2020 7:21 am
 Operator : edwardd
 Sample : cc6949-20 Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:38:05 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	34198	22.08	ug/L #	82
42) tetrahydrofuran	9.392	72	7129	18.45	ug/L #	75
43) chloroform	9.407	83	114611	22.06	ug/L	99
44) t-butyl formate	9.439	59	45363	15.06	ug/L	95
45) 1,1-dichloropropene	9.842	75	85017	20.42	ug/L	100
46) carbon tetrachloride	9.863	117	87766	22.26	ug/L	96
47) isopropyl acetate	10.021	87	13418	19.75	ug/L	94
49) methacrylonitrile	9.287	67	22809	20.90	ug/L	98
50) 1,1,1-trichloroethane	9.659	97	100944	21.84	ug/L	98
51) cyclohexane	9.738	84	94567	20.02	ug/L #	82
52) iso-butyl alcohol	9.848	43	23226	188.12	ug/L	94
53) tert amyl alcohol	9.968	73	15163	93.52	ug/L	92
56) 2,2,4-trimethylpentane	10.099	57	216939	22.44	ug/L	100
57) n-butyl alcohol	10.603	56	79331	1013.45	ug/L	98
58) benzene	10.105	78	263625	20.40	ug/L	98
59) tert-amyl methyl ether	10.131	73	199331	19.98	ug/L	95
60) heptane	10.267	57	47858	21.66	ug/L	95
61) 1,2-dichloroethane	10.115	62	83260	21.84	ug/L	99
62) ethyl acrylate	10.818	55	68818	20.25	ug/L	97
63) trichloroethene	10.818	95	62248	20.73	ug/L	97
64) 2-nitropropane	11.594	41	19331	20.80	ug/L #	30
65) 2-chloroethyl vinyl ether	11.599	63	171393	95.49	ug/L	98
66) methyl methacrylate	11.085	100	14772	20.25	ug/L #	83
67) 1,2-dichloropropane	11.075	63	64725	19.77	ug/L	96
68) methylcyclohexane	11.033	83	111584	20.84	ug/L	99
69) dibromomethane	11.237	93	37010	21.57	ug/L	95
70) bromodichloromethane	11.363	83	84043	21.96	ug/L	99
71) epichlorohydrin	11.725	57	27996	102.88	ug/L	96
72) cis-1,3-dichloropropene	11.819	75	103072	20.61	ug/L	97
73) 4-methyl-2-pentanone	11.908	58	85734	81.58	ug/L	95
74) 3-methyl-1-butanol	11.934	70	33249	408.06	ug/L	95
77) toluene	12.181	92	153066	19.89	ug/L	100
78) ethyl methacrylate	12.370	69	68243	19.87	ug/L	97
79) trans-1,3-dichloropropene	12.375	75	90877	21.42	ug/L	98
80) 1,1,2-trichloroethane	12.590	83	42880	20.08	ug/L	95
81) tetrachloroethene	12.763	164	51233	21.02	ug/L	98
82) 2-hexanone	12.758	58	73301	77.91	ug/L	97
83) 1,3-dichloropropane	12.773	76	87900	19.56	ug/L	97
84) butyl acetate	12.831	56	36699	19.14	ug/L	96
85) dibromochloromethane	13.035	129	59616	21.64	ug/L	96
86) 1,2-dibromoethane	13.182	107	56083	20.56	ug/L	94
87) n-butyl ether	13.555	57	247062	18.43	ug/L	99
88) chlorobenzene	13.638	112	160398	19.90	ug/L	96
89) 1,1,1,2-tetrachloroethane	13.701	131	60552	21.06	ug/L	98
90) ethylbenzene	13.696	91	276793	19.80	ug/L	99
91) m,p-xylene	13.801	106	215828	39.79	ug/L	97
92) o-xylene	14.215	91	224387	19.89	ug/L	100
93) styrene	14.226	104	171817	20.43	ug/L	96
94) butyl acrylate	14.042	55	98069	19.03	ug/L	99
95) bromoform	14.488	173	36247	21.66	ug/L	93
96) isopropylbenzene	14.551	105	272672	19.67	ug/L	97
97) cis-1,4-dichloro-2-butene	14.624	75	20181	16.96	ug/L	84
100) bromobenzene	14.949	156	70077	21.18	ug/L	89
101) 1,1,2,2-tetrachloroethane	14.855	83	63441	19.92	ug/L	98
102) trans-1,4-dichloro-2-b...	14.897	53	15744	19.06	ug/L	89
103) 1,2,3-trichloropropene	14.928	110	18498	19.91	ug/L	96
104) n-propylbenzene	14.960	91	317441	19.74	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
 Data File : 2e159597.d
 Acq On : 18 Feb 2020 7:21 am
 Operator : edwardd
 Sample : cc6949-20 Inst : VOAMS2E
 Misc : MS41190,V2E8003,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 00:38:05 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

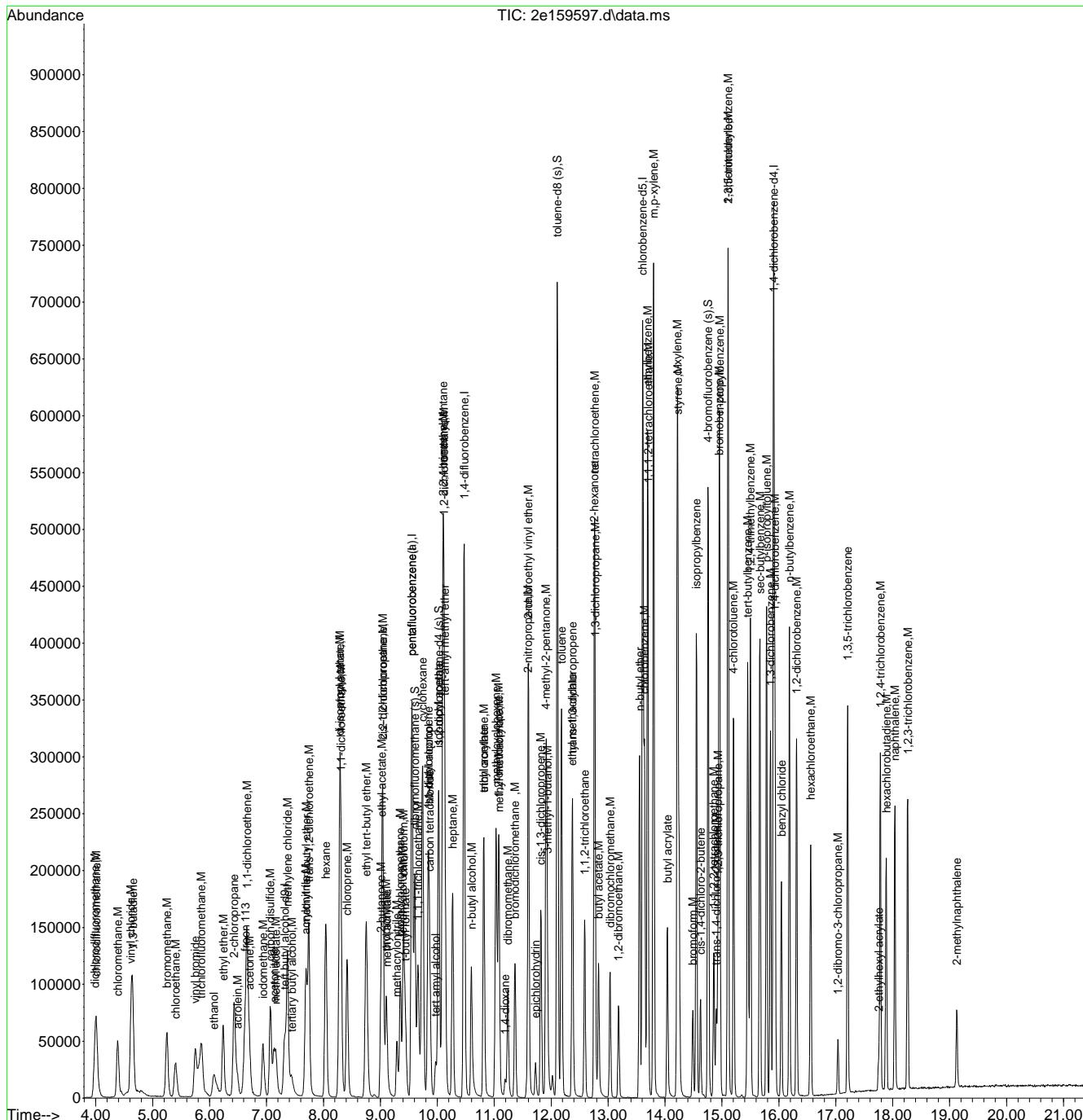
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
105) 2-chlorotoluene	15.106	126	65012	19.51	ug/L	97
106) 4-chlorotoluene	15.201	91	195096	20.12	ug/L	96
107) 1,3,5-trimethylbenzene	15.106	105	230219	20.06	ug/L	97
108) tert-butylbenzene	15.453	119	220556	22.37	ug/L	96
109) 1,2,4-trimethylbenzene	15.500	105	231077	20.28	ug/L	98
110) sec-butylbenzene	15.667	105	281724	19.24	ug/L	100
111) 1,3-dichlorobenzene	15.851	146	129462	20.38	ug/L	98
112) p-isopropyltoluene	15.783	119	240444	19.34	ug/L	98
113) 1,4-dichlorobenzene	15.930	146	131571	20.42	ug/L	98
114) 1,2-dichlorobenzene	16.312	146	124651	19.73	ug/L	97
115) n-butylbenzene	16.187	92	121391	19.18	ug/L	97
116) 1,2-dibromo-3-chloropr...	17.036	157	12562	17.54	ug/L	86
117) 1,3,5-trichlorobenzene	17.209	180	101755	19.63	ug/L	98
118) 1,2,4-trichlorobenzene	17.780	180	86218	18.71	ug/L	97
119) 2-ethylhexyl acrylate	17.754	70	6426	1.97	ug/L	95
120) hexachlorobutadiene	17.885	225	41990	19.14	ug/L	97
121) naphthalene	18.037	128	185813	18.08	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	77994	18.31	ug/L	98
123) hexachloroethane	16.559	201	37848	20.85	ug/L	93
124) benzyl chloride	16.045	91	130672	19.50	ug/L	98
125) 2-methylnaphthalene	19.123	142	33464	6.15	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-19-20\v2e8003\
Data File : 2e159597.d
Acq On : 18 Feb 2020 7:21 am
Operator : edwardd
Sample : cc6949-20 Inst : VOAMS2
Misc : MS41190,V2E8003,5,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 00:38:05 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



Mei Chen
 02/20/20 13:20

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20
 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:27:29 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.326	65	133762	500.00	ug/L	-0.01
5) pentafluorobenzene	9.554	168	294730	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	10.472	114	456192	50.00	ug/L	-0.01
75) chlorobenzene-d5	13.607	117	376014	50.00	ug/L	-0.02
98) 1,4-dichlorobenzene-d4	15.909	152	188351	50.00	ug/L	-0.01
128) pentafluorobenzene(a)	9.554	168	294730	50.00	ug/L	-0.01
System Monitoring Compounds						
48) dibromofluoromethane (s)	9.607	113	135870	52.09	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	104.18%	
55) 1,2-dichloroethane-d4 (s)	10.026	65	148241	54.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.00%	
76) toluene-d8 (s)	12.108	98	491561	47.33	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.66%	
99) 4-bromofluorobenzene (s)	14.755	95	181429	49.40	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.80%	
Target Compounds						
					Qvalue	
2) ethanol	6.078	45	66015	1813.99	ug/L	90
3) tertiary butyl alcohol	7.441	59	39534	110.83	ug/L	98
4) 1,4-dioxane	11.190	88	16453	554.78	ug/L	91
6) chlorodifluoromethane	4.012	51	90931	18.32	ug/L	96
7) dichlorodifluoromethane	3.997	85	88944	23.72	ug/L	99
8) chloromethane	4.390	50	87318	16.87	ug/L	95
9) vinyl chloride	4.626	62	89341	17.52	ug/L	99
10) bromomethane	5.255	94	61250	20.29	ug/L	98
11) chloroethane	5.407	64	50450	19.12	ug/L	97
12) trichlorofluoromethane	5.858	101	102130	23.93	ug/L	93
13) 1,3-butadiene	4.652	54	64457	18.67	ug/L	97
14) vinyl bromide	5.753	106	53266	21.60	ug/L	97
15) ethyl ether	6.241	74	37081	20.10	ug/L	98
16) 2-chloropropane	6.429	43	111633	19.25	ug/L	94
17) acrolein	6.492	56	11531	19.66	ug/L	97
18) freon 113	6.639	151	51436	23.25	ug/L	94
19) 1,1-dichloroethene	6.660	61	97720	21.55	ug/L	99
20) acetone	6.702	43	64910	76.16	ug/L	92
21) acetonitrile	7.132	41	78041m	195.04	ug/L	
22) iodomethane	6.943	142	79543	21.67	ug/L	99
23) carbon disulfide	7.069	76	172743	21.27	ug/L	98
24) methylene chloride	7.373	84	67813	20.91	ug/L	89
25) methyl acetate	7.169	43	46115	21.25	ug/L	97
26) methyl tert butyl ether	7.698	73	176242	20.01	ug/L	96
27) trans-1,2-dichloroethene	7.745	61	91283	21.63	ug/L	97
28) hexane	8.044	56	52538	22.68	ug/L	# 84
29) di-isopropyl ether	8.285	45	225521	19.84	ug/L	95
30) ethyl tert-butyl ether	8.752	59	208569	21.10	ug/L	98
31) 2-butanone	9.004	72	26822	89.10	ug/L	# 82
32) 1,1-dichloroethane	8.306	63	119826	21.26	ug/L	98
33) chloroprene	8.416	53	99442	21.60	ug/L	98
34) acrylonitrile	7.693	53	22313	20.22	ug/L	96
35) vinyl acetate	8.291	86	14569	23.24	ug/L	# 83
36) ethyl acetate	9.030	45	9653	19.72	ug/L	99
37) 2,2-dichloropropane	9.040	77	99545	20.39	ug/L	97
38) cis-1,2-dichloroethene	9.046	96	74004	21.49	ug/L	89
39) propionitrile	9.103	54	75700	191.11	ug/L	99
40) methyl acrylate	9.114	85	8178	20.51	ug/L	# 77

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:27:29 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
41) bromochloromethane	9.350	128	34413	21.94	ug/L	88
42) tetrahydrofuran	9.397	72	7782	19.89	ug/L	90
43) chloroform	9.407	83	114910	21.85	ug/L	98
44) t-butyl formate	9.439	59	44227	14.50	ug/L	99
45) 1,1-dichloropropene	9.837	75	86128	20.43	ug/L	99
46) carbon tetrachloride	9.864	117	87665	21.96	ug/L	97
47) isopropyl acetate	10.021	87	14076	20.46	ug/L	94
49) methacrylonitrile	9.292	67	22387	20.26	ug/L	86
50) 1,1,1-trichloroethane	9.664	97	101411	21.67	ug/L	95
51) cyclohexane	9.738	84	93573	19.56	ug/L	#
52) iso-butyl alcohol	9.843	43	23597	188.75	ug/L	99
53) tert amyl alcohol	9.968	73	16608	101.16	ug/L	91
56) 2,2,4-trimethylpentane	10.100	57	221439	22.69	ug/L	97
57) n-butyl alcohol	10.598	56	89840	1136.92	ug/L	99
58) benzene	10.105	78	266539	20.43	ug/L	99
59) tert-amyl methyl ether	10.131	73	204374	20.29	ug/L	97
60) heptane	10.273	57	49252	22.09	ug/L	96
61) 1,2-dichloroethane	10.115	62	84085	21.85	ug/L	99
62) ethyl acrylate	10.818	55	69393	20.23	ug/L	99
63) trichloroethene	10.818	95	63652	21.00	ug/L	98
64) 2-nitropropane	11.583	41	20001	21.32	ug/L	#
65) 2-chloroethyl vinyl ether	11.599	63	175533	96.87	ug/L	98
66) methyl methacrylate	11.080	100	15191	20.62	ug/L	93
67) 1,2-dichloropropane	11.080	63	64553	19.53	ug/L	94
68) methylcyclohexane	11.033	83	113944	21.09	ug/L	98
69) dibromomethane	11.237	93	36650	21.16	ug/L	95
70) bromodichloromethane	11.363	83	84484	21.87	ug/L	99
71) epichlorohydrin	11.725	57	28650	104.29	ug/L	97
72) cis-1,3-dichloropropene	11.819	75	102364	20.27	ug/L	97
73) 4-methyl-2-pentanone	11.908	58	86083	81.14	ug/L	95
74) 3-methyl-1-butanol	11.935	70	34071	414.21	ug/L	94
77) toluene	12.181	92	155892	20.33	ug/L	99
78) ethyl methacrylate	12.370	69	68222	19.94	ug/L	98
79) trans-1,3-dichloropropene	12.375	75	90819	21.48	ug/L	99
80) 1,1,2-trichloroethane	12.590	83	43609	20.50	ug/L	98
81) tetrachloroethene	12.763	164	49666	20.45	ug/L	99
82) 2-hexanone	12.758	58	75681	80.73	ug/L	95
83) 1,3-dichloropropane	12.768	76	90105	20.12	ug/L	99
84) butyl acetate	12.831	56	37723	19.74	ug/L	99
85) dibromochloromethane	13.036	129	58278	21.23	ug/L	98
86) 1,2-dibromoethane	13.182	107	55631	20.47	ug/L	92
87) n-butyl ether	13.555	57	252493	18.90	ug/L	99
88) chlorobenzene	13.639	112	160844	20.03	ug/L	96
89) 1,1,1,2-tetrachloroethane	13.701	131	59680	20.83	ug/L	97
90) ethylbenzene	13.696	91	277731	19.94	ug/L	100
91) m,p-xylene	13.801	106	216973	40.14	ug/L	95
92) o-xylene	14.215	91	228025	20.29	ug/L	99
93) styrene	14.226	104	174258	20.80	ug/L	98
94) butyl acrylate	14.042	55	99677	19.41	ug/L	97
95) bromoform	14.488	173	36070	21.63	ug/L	95
96) isopropylbenzene	14.551	105	274324	19.86	ug/L	99
97) cis-1,4-dichloro-2-butene	14.624	75	21486	18.12	ug/L	#
100) bromobenzene	14.949	156	69368	21.04	ug/L	96
101) 1,1,2,2-tetrachloroethane	14.855	83	63909	20.13	ug/L	98
102) trans-1,4-dichloro-2-b...	14.897	53	16604	20.17	ug/L	91
103) 1,2,3-trichloropropene	14.928	110	19079	20.60	ug/L	96
104) n-propylbenzene	14.960	91	319351	19.93	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:27:29 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration

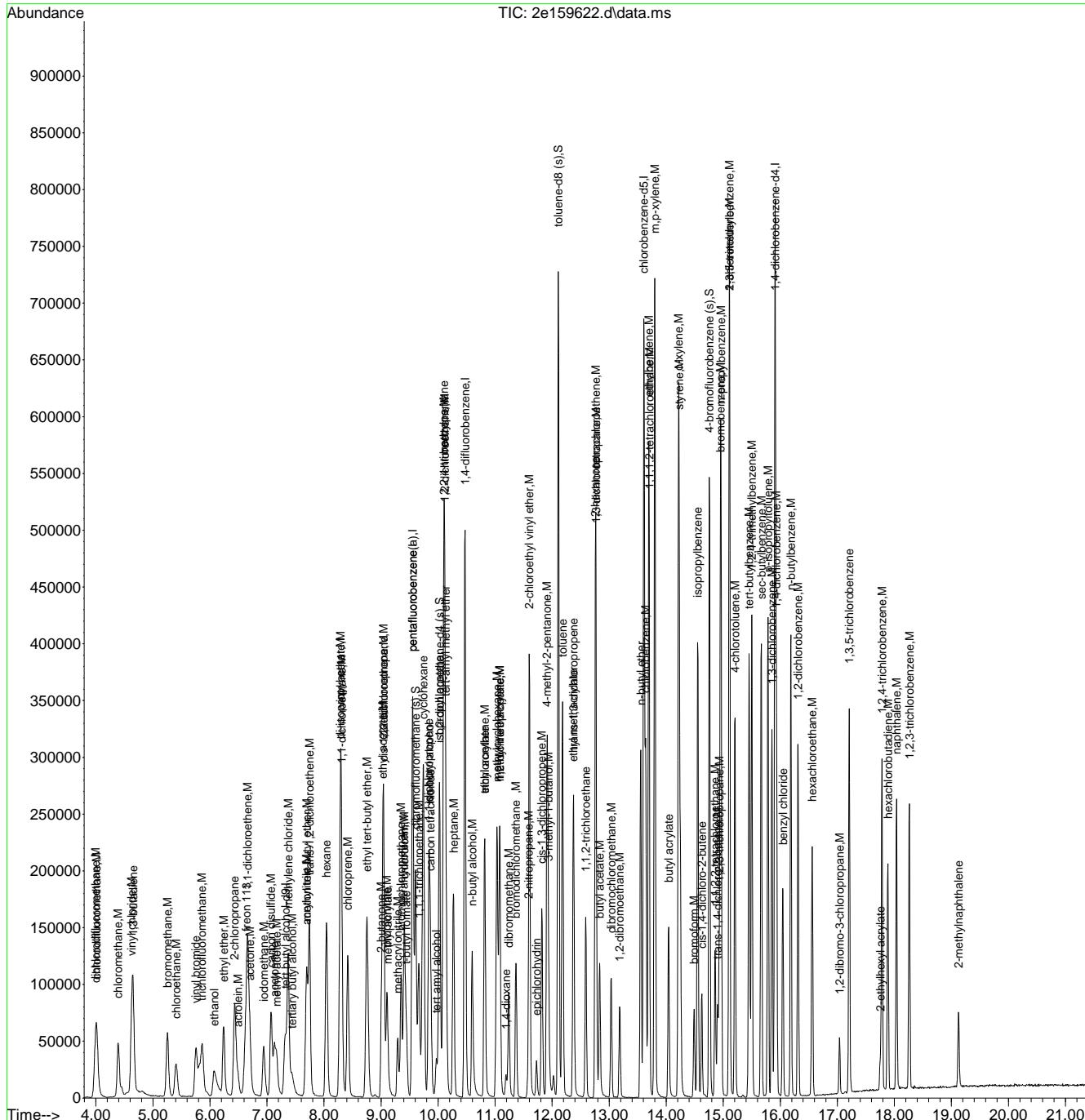
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
105) 2-chlorotoluene	15.107	126	65339	19.67	ug/L	96
106) 4-chlorotoluene	15.206	91	196720	20.35	ug/L	99
107) 1,3,5-trimethylbenzene	15.107	105	233422	20.40	ug/L	96
108) tert-butylbenzene	15.453	119	198575	20.21	ug/L	99
109) 1,2,4-trimethylbenzene	15.500	105	234830	20.68	ug/L	96
110) sec-butylbenzene	15.668	105	282149	19.33	ug/L	98
111) 1,3-dichlorobenzene	15.851	146	127805	20.18	ug/L	97
112) p-isopropyltoluene	15.783	119	244503	19.72	ug/L	98
113) 1,4-dichlorobenzene	15.930	146	131220	20.43	ug/L	100
114) 1,2-dichlorobenzene	16.313	146	124726	19.81	ug/L	99
115) n-butylbenzene	16.187	92	122096	19.35	ug/L	98
116) 1,2-dibromo-3-chloropr...	17.041	157	12606	17.66	ug/L	92
117) 1,3,5-trichlorobenzene	17.209	180	100945	19.54	ug/L	99
118) 1,2,4-trichlorobenzene	17.781	180	84694	18.44	ug/L	97
119) 2-ethylhexyl acrylate	17.754	70	6111	1.88	ug/L	82
120) hexachlorobutadiene	17.885	225	41469	18.97	ug/L	93
121) naphthalene	18.037	128	182952	17.85	ug/L	99
122) 1,2,3-trichlorobenzene	18.263	180	76118	17.93	ug/L	99
123) hexachloroethane	16.559	201	37745	20.86	ug/L	97
124) benzyl chloride	16.045	91	132635	19.86	ug/L	97
125) 2-methylnaphthalene	19.128	142	32963	6.08	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
Data File : 2e159622.d
Acq On : 19 Feb 2020 7:16 am
Operator : edwardd
Sample : CC6949-20 Inst : VOAMS2E
Misc : MS41200,V2E8004,5,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
Quant Results File: M2E6949.RES
Quant Time: Feb 19 22:27:29 2020
Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
QLast Update : Mon Jan 20 11:39:19 2020
Response via : Initial Calibration



Manual Integration Approval Summary

Page 1 of 1

Sample Number: V2E8004-CC6949
Lab FileID: 2E159622.D
Injection Time: 02/19/20 07:16

Method: SW846 8260C
Analyst approved: 02/19/20 22:31 Dave Moriente
Supervisor approved: 02/20/20 13:20 Mei Chen

Parameter	CAS	Sig#	R.T. (min.)	Reason
Acetonitrile	75-05-8		7.13	Poor instrument integration

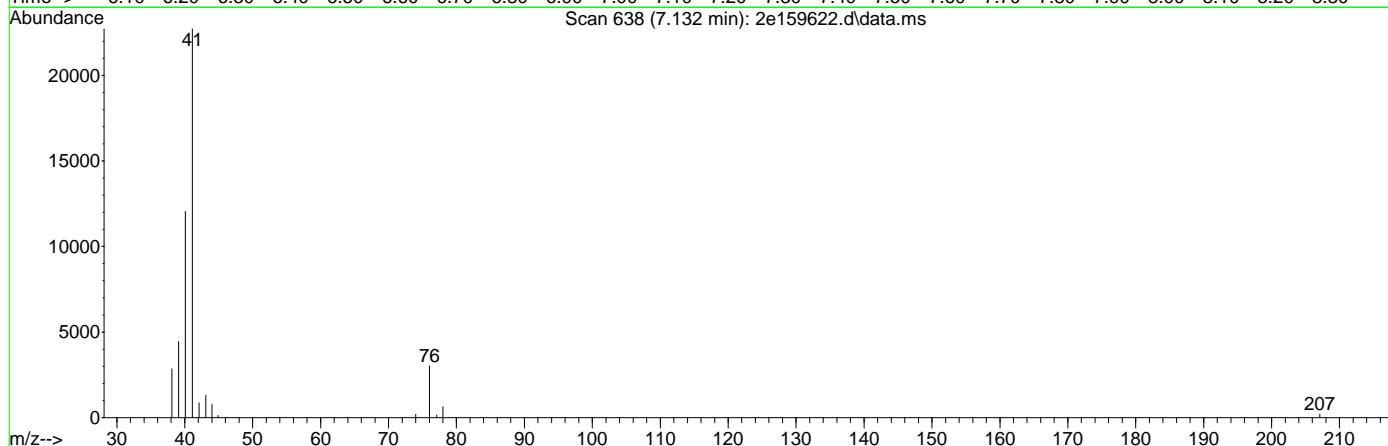
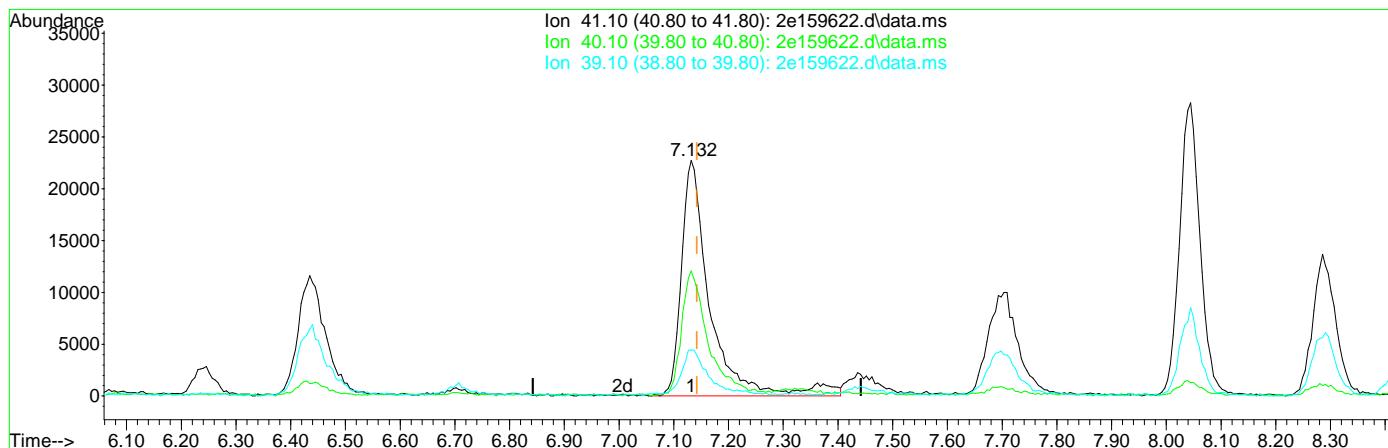
7.6.15.1

7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwardd
 Sample : CC6949-20 Inst : VOAMS2E
 Misc : MS41200,V2E8004,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:24:39 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159622.d\data.ms

(21) acetonitrile
 7.132min (-0.010) 206.29ug/L

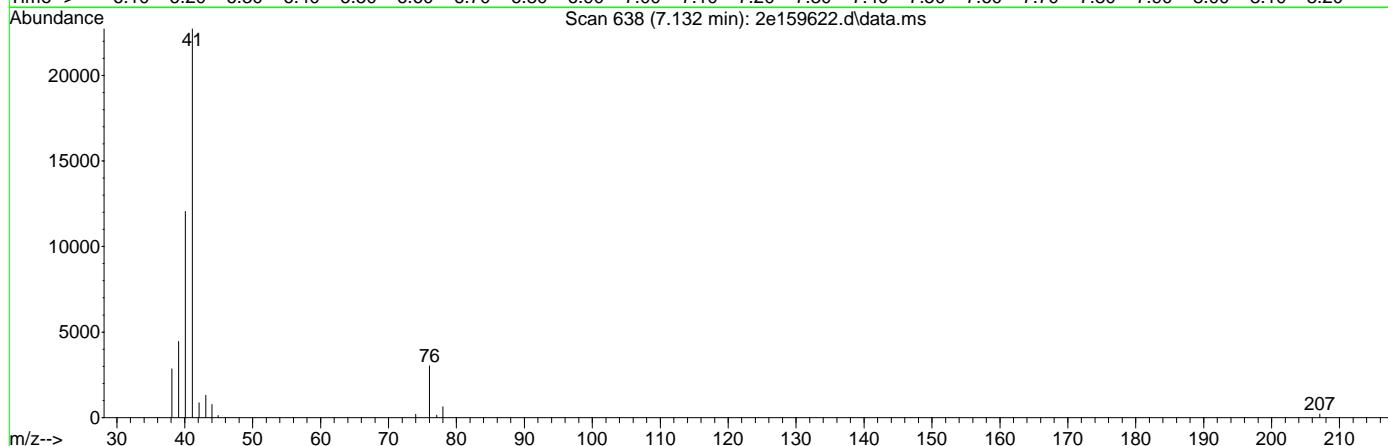
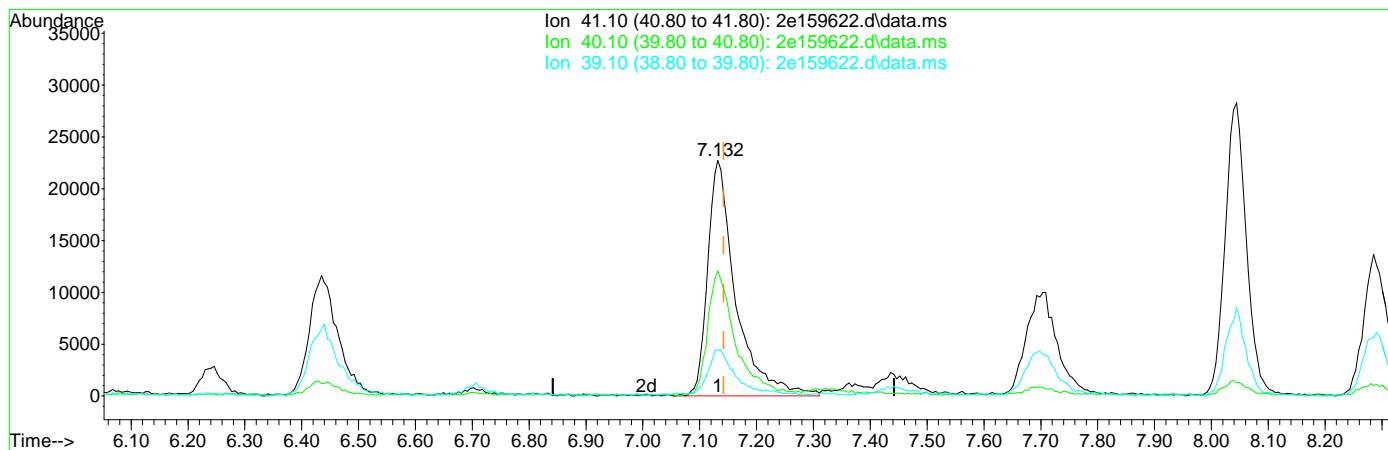
response 82544

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.07
39.10	19.60	18.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\davem1\02-20-20\v2e8004\
 Data File : 2e159622.d
 Acq On : 19 Feb 2020 7:16 am
 Operator : edwarddd
 Sample : CC6949-20
 Misc : MS41200,V2E8004,5,,,1
 ALS Vial : 2 Sample Multiplier: 1
 Inst : VOAMS2E

Quant Method : C:\MSDCHEM\1\METHODS\M2E6949.M
 Quant Results File: M2E6949.RES
 Quant Time: Feb 19 22:24:39 2020
 Quant Title : SW-846 Method V8260C / EPA 624 , ZB624 60Mx0.25MMx1.4UM
 QLast Update : Mon Jan 20 11:39:19 2020
 Response via : Initial Calibration



TIC: 2e159622.d\data.ms

(21) acetonitrile

7.132min (-0.010) 195.04ug/L m

response 78041

Ion	Exp%	Act%
41.10	100	100
40.10	51.80	53.07
39.10	19.60	19.57
0.00	0.00	0.00

GCMS Volatile Run Log

Standard / Reagents				Lot #							
STANDARDS	ABK v019-2688-22.56	EC v019-2688-40.8		Acrolein v019-2688-32.3		Method		ZB624/60mx0.25mmx1.4um		V8260C	
Standard Concentrations	100ppm-10,000 ppm	100 ppm		100 ppm		Init Calib Date				10/9/19	
EXPIRATION	10/23/2019	10/14/2019		10/27/2019							
STANDARDS	ABK v019-2688-38.7	EC v019-2688-36.6		Acrolein v019-2688-39.2	Ext PA: V019-2688-4	Analysis Date				10/9/2019	
Standard Concentrations	100ppm-10,000 ppm	100 ppm		100 ppm	100/1000 ppm	Sequence loaded by				Robert Szot	
EXPIRATION	11/3/19	10/10/19		11/3/19	11/9/19	Data processed by				Robert Szot	
INTERNAL SURROGATE	v019-2688-25					Batch ID				V2E6949	
Internal Surrogate Concentration	250/2500ppm					Matrix				AQ	
EXPIRATION	10/25/19					Approved By:				KANYAV	
pH Paper Lot#	204518			Initial Calibration Method	M2E6949	Approved Date:				10/11/2019 12:40:12 PM	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2E 156547	BFB	NA				5			1	ok	2:58 pm
2E 156548	IC6949-0.2	NA			8260 initial calibration	5			2	ok	1 uL ABK, EC, Acrolein / 500 mL DI H2O
2E 156549	IC6949-0.5	NA			8260 initial calibration	5			3	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
2E 156550	IC6949-1	NA			8260 initial calibration	5			4	ok	5 uL ABK, EC, Acrolein / 500 mL DI H2O
2E 156551	IC6949-2	NA			8260 initial calibration	5			5	ok	4 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156552	IC6949-4	NA			8260 initial calibration	5			6	ok	8 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156553	IC6949-8	NA			8260 initial calibration	5			7	ok	16 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156554	IC6949-20	NA			8260 initial calibration	5			8	ok	40 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156555	ICCG6949-50	NA			8260 initial calibration	5			9	ok	100 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156556	IC6949-100	NA			8260 initial calibration	5			10	ok	200 uL ABK, EC, Acrolein / 200 mL DI H2O
2E 156557	IC6949-200	NA			8260 initial calibration	5			11	ok	400 uL ABK, EC, Acrolein / 200 mL DI H2O

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2E 156558	ICV6949-50	IB	NA			5			12	ok	
2E 156559	ICV6949-50	IB	NA			5			13	ok	
2E 156560	ICV6949-50	NA		8260 initial calibration		5			14	ok	100 uL Ext ABK (-38.7), Ext EC, Ext Acrolein / 200 mL DI H2O
2E 156561	ICV6949-50	NA		8260 initial calibration		5			15	ok	100 uL Ext PA / 200 mL DI H2O
2E 156562	IB	NA				5			16	ok	
2E 156563	BFB2	NA				5			17	ok	
2E 156564	ICV6949-50	NA		8260 initial calibration		5			18	NG	internal standard 300% high after being idle for a short while
2E 156565	IB	NA				5			19	ok	
2E 156566	ICV6949-50	NA		8260 initial calibration		5			20	ok	100 uL Ext ABK (-38.1) / 200 mL DI H2O

GCMS Volatile Run Log

Standard / Reagents				Lot #					
Standards	ABK:V019-2692-77-9	EC: V019-2692-92-4		Acrolein: V019-2692-88-47		Column		ZB-624(60mx0.25mmx1.4um)	v8260c
Standard Concentration	100-10,000ppm	100ppm		100ppm		Method			10/9/2019
Expiration Date	3/4/2020	2/19/2020		3/11/2020		Init Calib Date			
Internal Surrogate	V019-2692-83					Analysis Date		2/18/2020	
Internal Surrogate Concentration	250/2,500ppm					Sequence loaded by		Edward Dumer	
Expiration Date	03/04/2020					Data processed by		nizelle	
						Batch ID		V2E8003	
						Matrix		AQ	
Initial Calibration Method	M2E8949					Approved By:		MOHUI	
pH Paper Lot#	217518					Approved Date:		2/19/2020 11:59:34 AM	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge	ALS	Status	Comments
						Vol (ml)			
2E 159596	IB		NA			5		1	ok
2E 159597	BFBCC6949-20		NA			5		2	ok\ok 20ul abk,ec,acrolein/100ml, 7:2:1am
2E 159598	BS		NA			5		3	ok 50ul abk,ec,acrolein/100ml
2E 159599	IB		NA			5		4	ok
2E 159600	MB		NA			5		5	ok
2E 159601	JD3297-3MS	4	NA	MS41190	V8260RCP	5	1	6	ok 20ul abk,ec,acrolein/40ml, V2E8002
2E 159602	IB		NA			5		7	ok
2E 159603	JD3297-5DUP	4	NA	MS41190	V8260RCP	5	1	8	V2E8002
2E 159604	JD3298-12	6	NA	MS41200	V8260SL	5	1	9	ok dilution due to foaming, 1x foamed out, foamed out
2E 159605	JD2834-1	2	2	MS40988	V8260TCL20+	25/50	1	10	
2E 159606	JD2955-5	2	NA	MS41039	V8260BTXMN	5	1	11	ok

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2E 159607	JD3091-1	4	25	MS41110	V8260TCL20+	2/50	1	12	ok	headspace	
2E 159608	JD3298-12MS	7	NA	MS41200	V8260SL	5	1	13	ok	20ul abk,ec,acrolein/40ml	
2E 159609	JD3298-12MSD	9	NA	MS41200	V8260SL	5	1	14	ok	20ul abk,ec,acrolein/40ml	
2E 159610	IB		NA			5			15	ok	
2E 159611	JD2834-1	2	5	MS40988	V8260TCL20+	10/50	1	16	ok	dilution due to foaming, 1x/2x foamed out	
2E 159612	JD3298-1	1	NA	MS41200	V8260SL	5	1	17	ok		
2E 159613	JD3298-2	1	NA	MS41200	V8260SL	5	1	18	ok		
2E 159614	JD3298-3	1	NA	MS41200	V8260SL	5	1	19	ok		
2E 159615	JD3298-4	1	NA	MS41200	V8260SL	5	1	20	ok		
2E 159616	JD3298-5	1	NA	MS41200	V8260SL	5	1	21	ok		
2E 159617	JD3298-7	1	NA	MS41200	V8260SL	5	1	22	ok		
2E 159618	JD3298-8	1	NA	MS41200	V8260SL	5	1	23	ok		
2E 159619	JD3298-9	1	NA	MS41200	V8260SL	5	1	24	ok		
2E 159620	JD3298-10	1	NA	MS41200	V8260SL	5	1	25	ok	7:18 pm	

GCMS Volatile Run Log

Standard / Reagents				Lot #				Column	
Standards	ABK: V019-2692-77-9	EC: V019-2692-92-4		Acrolein: V019-2692-88-47		Method		ZB-624(60mx0.25mmx1.4um)	v8260c
Standard Concentration	100-10,000ppm	100ppm		100ppm		Init Calib Date			10/9/2019
Expiration Date	3/4/2020	2/19/2020		3/11/2020					
Internal Surrogate	V019-2692-83					Analysis Date		2/19/2020	
Internal Surrogate Concentration	250/2,500ppm					Sequence loaded by		Edward Durner	
Expiration Date	03/04/2020					Data processed by		davem1	
						Batch ID		V2E8004	
						Matrix		AQ	
Initial Calibration Method	M2E8949					Approved By:		MEI	
pH Paper Lot#	217518					Approved Date:		2/20/2020 12:44:20 PM	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH #	ALS Status	Comments
2E 159621	IB	NA	NA			5		1	OK	
2E 159622	BFBCC6949-20	NA				5			2 OK/OK	20ul abk,ec,acrolein/100ml, 7:16am
2E 159623	BS	NA				5			3 OK	50ul abk,ec,acrolein/100ml
2E 159624	IB	NA				5			4 OK	
2E 159625	MB	NA				5			5 OK	
2E 159626	JD3298-6	1	NA	MS41200	V8260SL	5		1	6 OK	
2E 159627	JD3298-17	1	NA	MS41200	V8260SL	5		1	7 OK	
2E 159628	JD3298-11	1	NA	MS41200	V8260SL	5		1	8 OK	
2E 159629	JD2928-10	11	NA	MS41034	V8260NJTCL20+	5		1	9 OK	
2E 159630	JD3298-6MS	2	NA	MS41200	V8260SL	5		1	10 OK	20ul abk,ec,acrolein/40ml
2E 159631	JD3298-6MSD	3	NA	MS41200	V8260SL	5		1	11 OK	20ul abk,ec,acrolein/40ml

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	#	ALS Status	Comments
2E 159632	IB		NA			5			12	OK	
2E 159633	JD3298-20	1	NA	MS41200	V8260SL	5		1	13	OK	
2E 159634	JD3118-12	1	NA	MS41117	V8260TCL20+, TBA	5		1	14	OK	
2E 159635	JD3118-10	9	NA	MS41117	V8260TCL20+, TBA	5		1	15	OK	
2E 159636	JD3118-11	8	NA	MS41117	V8260TCL20+, TBA	5		1	16	OK	
2E 159637	JD3298-14	1	NA	MS41200	V8260SL	5		1	17	OK	
2E 159638	JD3298-15	1	NA	MS41200	V8260SL	5		1	18	OK	
2E 159639	JD3298-16	1	NA	MS41200	V8260SL	5		1	19	OK	
2E 159640	JD3298-18	1	NA	MS41200	V8260SL	5		1	20	OK	
2E 159641	JD3298-19	1	NA	MS41200	V8260SL	5		1	21	OK	
2E 159642	JD3296-10	4	NA	MS41184	V8260CP51GTC20	5		1	22	OK	
2E 159643	JD3296-11	1	NA	MS41184	V8260CP51GTC20	5		3	23	OK	
2E 159644	JD3296-8	4	NA	MS41184	V8260CP51GTC20	5		1	24	OK	
2E 159645	JD3296-9	5	5	MS41184	V8260CP51GTC20	10/50		1	25	OK/rr	rr 1x old (07:11 PM)

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60595520

SGS Job Number: JD3305

Sampling Dates: 02/13/20 - 02/14/20



Report to:

**AECOM, INC.
4320 Winfield Road
Warrenville, IL 60555
Peter.Hollatz@AECOM.com**

ATTN: Peter Hollatz

Total number of pages in report: 294



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

**Laura Degenhardt
General Manager**

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

SGS North America Inc. • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499

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Sample Summary

United Technologies Corporation

Job No: JD3305

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
---------------	----------------	---------	----------	------------------	------------------

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

JD3305-1	02/13/20	09:35 AH	02/15/20	AQ	Ground Water	HSSER-RAMW08-021320
JD3305-2	02/13/20	10:50 AH	02/15/20	AQ	Ground Water	HSSER-RAMW07-021320
JD3305-3	02/13/20	12:00 AH	02/15/20	AQ	Ground Water	HSSER-RAMW06-021320
JD3305-4	02/13/20	13:15 AH	02/15/20	AQ	Ground Water	HSSER-RAMW05-021320
JD3305-5	02/13/20	14:55 AH	02/15/20	AQ	Ground Water	HSSER-RAMW04-021320
JD3305-6	02/13/20	15:05 AH	02/15/20	AQ	Equipment Blank	HSSER-EBLK02-021320
JD3305-7	02/14/20	09:35 AH	02/15/20	AQ	Ground Water	HSSER-RAMW03-021420
JD3305-8	02/14/20	10:15 AH	02/15/20	AQ	Ground Water	HSSER-RAMW01-021420
JD3305-9	02/14/20	10:25 AH	02/15/20	AQ	Field Blank Water	HSSER-FBLK02-021420
JD3305-10	02/14/20	10:55 AH	02/15/20	AQ	Ground Water	HSSER-RAMW02-021420
JD3305-10D	02/14/20	10:55 AH	02/15/20	AQ	Water Dup/MSD	HSSER-MSD02-021420
JD3305-10S	02/14/20	10:55 AH	02/15/20	AQ	Water Matrix Spike	HSSER-MS02-021420

Sample Summary

(continued)

United Technologies Corporation

Job No: JD3305

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
JD3305-11	02/14/20	00:00 AH	02/15/20	AQ	Ground Water
JD3305-12	02/14/20	10:55 AH	02/15/20	AQ	Trip Blank Water



CASE NARRATIVE / CONFORMANCE SUMMARY

Client: United Technologies Corporation **Job No** JD3305
Site: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL **Report Date** 2/26/2020 8:45:57 AM

On 02/15/2020, 10 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 1.8 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD3305 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ	Batch ID: V2A8686
-------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD3162-1MS, JD3162-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for Tetrachloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix: AQ	Batch ID: VL9424
-------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD3305-10MS, JD3305-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

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Job Number: JD3305

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 02/13/20 thru 02/14/20

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD3305-1 HSSER-RAMW08-021320						
1,1-Dichloroethane	0.00059 J	0.0010	0.00057	mg/l	SW846 8260C	
JD3305-2 HSSER-RAMW07-021320						
1,1-Dichloroethane	0.0023	0.0010	0.00057	mg/l	SW846 8260C	
1,1-Dichloroethene	0.0015	0.0010	0.00059	mg/l	SW846 8260C	
Ethylbenzene	0.0026	0.0010	0.00060	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.200	0.0050	0.0027	mg/l	SW846 8260C	
JD3305-3 HSSER-RAMW06-021320						
1,1-Dichloroethane	0.0012	0.0010	0.00057	mg/l	SW846 8260C	
cis-1,2-Dichloroethene	0.0025	0.0010	0.00051	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.0261	0.0010	0.00054	mg/l	SW846 8260C	
JD3305-4 HSSER-RAMW05-021320						
1,1-Dichloroethane	0.0012	0.0010	0.00057	mg/l	SW846 8260C	
cis-1,2-Dichloroethene	0.0012	0.0010	0.00051	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.0018	0.0010	0.00054	mg/l	SW846 8260C	
Trichloroethene	0.00069 J	0.0010	0.00053	mg/l	SW846 8260C	
JD3305-5 HSSER-RAMW04-021320						
Tetrachloroethene	0.0016	0.0010	0.00090	mg/l	SW846 8260C	
Trichloroethene	0.00053 J	0.0010	0.00053	mg/l	SW846 8260C	
JD3305-6 HSSER-EBLK02-021320						
No hits reported in this sample.						
JD3305-7 HSSER-RAMW03-021420						
1,1-Dichloroethane	0.00058 J	0.0010	0.00057	mg/l	SW846 8260C	
Tetrachloroethene	0.0011	0.0010	0.00090	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.00082 J	0.0010	0.00054	mg/l	SW846 8260C	
JD3305-8 HSSER-RAMW01-021420						
Tetrachloroethene	0.0033	0.0010	0.00090	mg/l	SW846 8260C	
1,1,1-Trichloroethane	0.00056 J	0.0010	0.00054	mg/l	SW846 8260C	

Summary of Hits

Job Number: JD3305
Account: United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Collected: 02/13/20 thru 02/14/20

Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
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JD3305-9 HSSER-FBLK02-021420

No hits reported in this sample.

JD3305-10 HSSER-RAMW02-021420

No hits reported in this sample.

JD3305-11 HSSER-DUP02-021420

Tetrachloroethene	0.0013	0.0010	0.00090	mg/l	SW846 8260C
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JD3305-12 HSSER-TBLK02-021220

No hits reported in this sample.

Sample Results

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Client Sample ID:	HSSER-RAMW08-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-1	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319849.D	1	02/18/20 12:29	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00059	0.0010	0.00057	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW07-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-2	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A200817.D	1	02/19/20 15:10	ED	n/a	n/a	V2A8686
Run #2	L319859.D	5	02/18/20 16:59	ED	n/a	n/a	VL9424

Purge Volume	
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0023	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	0.0015	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	0.0026	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.200 ^a	0.0050	0.0027	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	94%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	89%	81-124%
2037-26-5	Toluene-D8	100%	100%	80-120%
460-00-4	4-Bromofluorobenzene	101%	92%	80-120%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW06-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-3	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319850.D	1	02/18/20 12:56	ED	n/a	n/a	VL9424
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0012	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0025	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0261	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
17060-07-0	1,2-Dichloroethane-D4	89%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW05-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-4	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319851.D	1	02/18/20 13:23	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0012	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0012	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0018	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.00069	0.0010	0.00053	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-120%
17060-07-0	1,2-Dichloroethane-D4	89%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	96%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW04-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-5	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319852.D	1	02/18/20 13:50	ED	n/a	n/a	VL9424
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0016	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	0.00053	0.0010	0.00053	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
17060-07-0	1,2-Dichloroethane-D4	91%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-EBLK02-021320	Date Sampled:	02/13/20
Lab Sample ID:	JD3305-6	Date Received:	02/15/20
Matrix:	AQ - Equipment Blank	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319853.D	1	02/18/20 14:17	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
17060-07-0	1,2-Dichloroethane-D4	92%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW03-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3305-7	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319854.D	1	02/18/20 14:44	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00058	0.0010	0.00057	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0011	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00082	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW01-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3305-8	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319855.D	1	02/18/20 15:11	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0033	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00056	0.0010	0.00054	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		80-120%
17060-07-0	1,2-Dichloroethane-D4	88%		81-124%
2037-26-5	Toluene-D8	101%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-FBLK02-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3305-9	Date Received:	02/15/20
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319856.D	1	02/18/20 15:38	ED	n/a	n/a	VL9424
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		81-124%
2037-26-5	Toluene-D8	104%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-RAMW02-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3305-10	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319841.D	1	02/18/20 08:53	ED	n/a	n/a	VL9424
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-DUP02-021420	Date Sampled:	02/14/20
Lab Sample ID:	JD3305-11	Date Received:	02/15/20
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319857.D	1	02/18/20 16:05	ED	n/a	n/a	VL9424
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0013	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		81-124%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	95%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

4.11
4

SGS North America Inc.

Report of Analysis

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4.12
4**Client Sample ID:** HSSER-TBLK02-021220**Lab Sample ID:** JD3305-12**Matrix:** AQ - Trip Blank Water**Method:** SW846 8260C**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Date Sampled:** 02/14/20**Date Received:** 02/15/20**Percent Solids:** n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L319848.D	1	02/18/20 12:02	ED	n/a	n/a	VL9424
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00090	mg/l	
108-88-3	Toluene	ND	0.0010	0.00053	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00079	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
17060-07-0	1,2-Dichloroethane-D4	90%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	94%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms**5****Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 1 of 2

Client / Reporting Information		Project Information		FED-EX Tracking #		Bottle Order Control #																																																																																																																																																																					
Company Name: AECOM		Project Name: UTAS Plants 1/2 Fac:1/HY		1215100006296		SGS Job # JD 3305																																																																																																																																																																					
Street Address 4320 W Field Rd		Street City Warrenville IL 60555 Zip 60555 State IL		Billing Information (if different from Report to)		Requested Analysis																																																																																																																																																																					
Project Contact Peter Hellat 2		Project # (00595520		Company Name		Matrix Codes																																																																																																																																																																					
Phone #		Client Purchase Order # —		City State Zip		DW - Drinking Water GW - Ground Water HW - Hand Wash SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Solid WIP - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank																																																																																																																																																																					
Sample(s) Name(s) P. Hellat 2 / A. Suklauskas		Phone # Peter Hellat 2		Project Manager Peter Hellat 2		Attention:																																																																																																																																																																					
<table border="1"> <thead> <tr> <th colspan="2">Collection</th> <th rowspan="2">Sampled by</th> <th rowspan="2">Date (or Comp. C)</th> <th rowspan="2">Matrix</th> <th colspan="5">Number of preserved Bottles</th> </tr> <tr> <th>SGS Sample #</th> <th>Field ID / Point of Collection</th> <th># of bottles</th> <th>HCl</th> <th>NaOH</th> <th>HNO3</th> <th>H2SO4</th> <th>EDTA</th> <th>MEOH</th> <th>ENONE</th> </tr> </thead> <tbody> <tr><td>1</td><td>HSSER-RAMW08-021320</td><td>2-13-20 0935</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>2</td><td>HSSER-RAMW07-021320</td><td>2-13-20 1050</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>3</td><td>HSSER-RAMW06-021320</td><td>2-13-20 1200</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>4</td><td>HSSER-RAMW05-021320</td><td>2-13-20 1315</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>5</td><td>HSSER-RAMW04-021320</td><td>2-13-20 1455</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>6</td><td>HSSER-EBL02-021320</td><td>2-13-20 1505</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>7</td><td>HSSER-RAMW03-021420</td><td>2-14-20 0935</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>8</td><td>HSSER-RAMW01-021420</td><td>2-14-20 1015</td><td>AS</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>9</td><td>HSSER-FBK02-021420</td><td>2-14-20 1025</td><td>AS</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td>10</td><td>HSSER-RAMW02-021420</td><td>2-14-20 1055</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td></td><td>HSSER-MSD02-021420</td><td>2-14-20 1055</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td></td><td>HSSER-MSD01-021420</td><td>2-14-20 1055</td><td>AH</td><td>G GW</td><td>3</td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr> </tbody> </table>								Collection		Sampled by	Date (or Comp. C)	Matrix	Number of preserved Bottles					SGS Sample #	Field ID / Point of Collection	# of bottles	HCl	NaOH	HNO3	H2SO4	EDTA	MEOH	ENONE	1	HSSER-RAMW08-021320	2-13-20 0935	AH	G GW	3	X					X	2	HSSER-RAMW07-021320	2-13-20 1050	AH	G GW	3	X					X	3	HSSER-RAMW06-021320	2-13-20 1200	AH	G GW	3	X					X	4	HSSER-RAMW05-021320	2-13-20 1315	AH	G GW	3	X					X	5	HSSER-RAMW04-021320	2-13-20 1455	AH	G GW	3	X					X	6	HSSER-EBL02-021320	2-13-20 1505	AH	G GW	3	X					X	7	HSSER-RAMW03-021420	2-14-20 0935	AH	G GW	3	X					X	8	HSSER-RAMW01-021420	2-14-20 1015	AS	G GW	3	X					X	9	HSSER-FBK02-021420	2-14-20 1025	AS	G GW	3	X					X	10	HSSER-RAMW02-021420	2-14-20 1055	AH	G GW	3	X					X		HSSER-MSD02-021420	2-14-20 1055	AH	G GW	3	X					X		HSSER-MSD01-021420	2-14-20 1055	AH	G GW	3	X					X
Collection		Sampled by	Date (or Comp. C)	Matrix	Number of preserved Bottles																																																																																																																																																																						
SGS Sample #	Field ID / Point of Collection				# of bottles	HCl	NaOH	HNO3	H2SO4	EDTA	MEOH	ENONE																																																																																																																																																															
1	HSSER-RAMW08-021320	2-13-20 0935	AH	G GW	3	X					X																																																																																																																																																																
2	HSSER-RAMW07-021320	2-13-20 1050	AH	G GW	3	X					X																																																																																																																																																																
3	HSSER-RAMW06-021320	2-13-20 1200	AH	G GW	3	X					X																																																																																																																																																																
4	HSSER-RAMW05-021320	2-13-20 1315	AH	G GW	3	X					X																																																																																																																																																																
5	HSSER-RAMW04-021320	2-13-20 1455	AH	G GW	3	X					X																																																																																																																																																																
6	HSSER-EBL02-021320	2-13-20 1505	AH	G GW	3	X					X																																																																																																																																																																
7	HSSER-RAMW03-021420	2-14-20 0935	AH	G GW	3	X					X																																																																																																																																																																
8	HSSER-RAMW01-021420	2-14-20 1015	AS	G GW	3	X					X																																																																																																																																																																
9	HSSER-FBK02-021420	2-14-20 1025	AS	G GW	3	X					X																																																																																																																																																																
10	HSSER-RAMW02-021420	2-14-20 1055	AH	G GW	3	X					X																																																																																																																																																																
	HSSER-MSD02-021420	2-14-20 1055	AH	G GW	3	X					X																																																																																																																																																																
	HSSER-MSD01-021420	2-14-20 1055	AH	G GW	3	X					X																																																																																																																																																																
Turn Around Time (Business Days)								Deliverable		Comments / Special Instructions																																																																																																																																																																	
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier 1 (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKGP		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MAC Criteria <input type="checkbox"/> CT RCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Forms		<input type="checkbox"/> DOD-QSM5																																																																																																																																																																			
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Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data																																																																																																																																																																											
Sample Custody must be documented below each time samples change possession, including courier delivery.																																																																																																																																																																											
Relinquished by: 1 Peter Hellat	Date / Time: 2/14/20 1800	Received By: F. Soto	Relinquished by: 2	Date / Time: 2/15/20	Received By: D																																																																																																																																																																						
Relinquished by: 3	Date / Time: 3	Received By: 4	Relinquished by: 4	Date / Time: 4	Received By: ..																																																																																																																																																																						
Relinquished by: 5	Date / Time: 5	Received By: 5	Custody Seal #	Intact <input type="checkbox"/> Not Intact <input type="checkbox"/>	Preserved where applicable <input type="checkbox"/> Absent <input type="checkbox"/>	On Ice <input type="checkbox"/>	Cooler Temp. 2-10°C IP																																																																																																																																																																				
SGS North America Inc. - Dayton 2235 Route 130, Dayton, NJ 08810 TEL: 732-329-2000 FAX: 732-349-3480 www.sgs.com/ehsusa																																																																																																																																																																											

EHSA-QAC-0023-02-FORM-Dayton - Standard COC

JD3305: Chain of Custody
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CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

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EHSAC-QAC-0023-02-FORM-Dayton - Standard COC

JD3305: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: JD3305 Client: AECOM, INC. Project: ENSRILW: UTAS PLANTS 1/2 FACILITY, ROCKF
 Date / Time Received: 2/15/2020 10:00:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (1.8);

Cooler Security	Y or N	Y or N	Sample Integrity - Documentation	Y or N
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>
			3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>
Cooler Temperature	Y or N		Sample Integrity - Condition	Y or N
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>		1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Cooler temp verification:	IR Gun		2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Cooler media:	Ice (Bag)		3. Condition of sample:	Intact
4. No. Coolers:	1			
Quality Control Preservation	Y or N	N/A	Sample Integrity - Instructions	Y or N
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		2. Bottles received for unspecified tests	<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>		3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
			5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

Test Strip Lot #s:	pH 1-12: 229517	pH 12+: 208717	Other: (Specify) _____
--------------------	-----------------	----------------	------------------------

Comments

SM089-03
Rev. Date 12/7/17

JD3305: Chain of Custody

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5.1

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JD3305ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD3305-1	Collected: 13-FEB-20 09:35 By: AH HSSER-RAMW08-021320			Received: 15-FEB-20 By: JP		
JD3305-1	SW846 8260C	18-FEB-20 12:29	ED			V8260SL
JD3305-2	Collected: 13-FEB-20 10:50 By: AH HSSER-RAMW07-021320			Received: 15-FEB-20 By: JP		
JD3305-2	SW846 8260C	18-FEB-20 16:59	ED			V8260SL
JD3305-2	SW846 8260C	19-FEB-20 15:10	ED			V8260SL
JD3305-3	Collected: 13-FEB-20 12:00 By: AH HSSER-RAMW06-021320			Received: 15-FEB-20 By: JP		
JD3305-3	SW846 8260C	18-FEB-20 12:56	ED			V8260SL
JD3305-4	Collected: 13-FEB-20 13:15 By: AH HSSER-RAMW05-021320			Received: 15-FEB-20 By: JP		
JD3305-4	SW846 8260C	18-FEB-20 13:23	ED			V8260SL
JD3305-5	Collected: 13-FEB-20 14:55 By: AH HSSER-RAMW04-021320			Received: 15-FEB-20 By: JP		
JD3305-5	SW846 8260C	18-FEB-20 13:50	ED			V8260SL
JD3305-6	Collected: 13-FEB-20 15:05 By: AH HSSER-EBLK02-021320			Received: 15-FEB-20 By: JP		
JD3305-6	SW846 8260C	18-FEB-20 14:17	ED			V8260SL
JD3305-7	Collected: 14-FEB-20 09:35 By: AH HSSER-RAMW03-021420			Received: 15-FEB-20 By: JP		
JD3305-7	SW846 8260C	18-FEB-20 14:44	ED			V8260SL
JD3305-8	Collected: 14-FEB-20 10:15 By: AH HSSER-RAMW01-021420			Received: 15-FEB-20 By: JP		
JD3305-8	SW846 8260C	18-FEB-20 15:11	ED			V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JD3305

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60595520

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD3305-9	Collected: 14-FEB-20 10:25 By: AH HSSER-FBLK02-021420			Received: 15-FEB-20	By: JP	
JD3305-9	SW846 8260C	18-FEB-20 15:38	ED			V8260SL
JD3305-10	Collected: 14-FEB-20 10:55 By: AH HSSER-RAMW02-021420			Received: 15-FEB-20	By: JP	
JD3305-10	SW846 8260C	18-FEB-20 08:53	ED			V8260SL
JD3305-11	Collected: 14-FEB-20 00:00 By: AH HSSER-DUP02-021420			Received: 15-FEB-20	By: JP	
JD3305-11	SW846 8260C	18-FEB-20 16:05	ED			V8260SL
JD3305-12	Collected: 14-FEB-20 10:55 By: AH HSSER-TBLK02-021220			Received: 15-FEB-20	By: JP	
JD3305-12	SW846 8260C	18-FEB-20 12:02	ED			V8260SL

SGS Internal Chain of Custody

Page 1 of 2

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/15/20

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD3305-1.2	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-1.2	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-1.2	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-1.2	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-2.1	Secured Storage	Edward Durner	02/19/20 15:34	Retrieve from Storage
JD3305-2.1	Edward Durner	GCMS2A	02/19/20 15:34	Load on Instrument
JD3305-2.1	GCMS2A	Edward Durner	02/20/20 12:32	Unload from Instrument
JD3305-2.1	Edward Durner	Secured Storage	02/20/20 12:33	Return to Storage
JD3305-2.2	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-2.2	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-2.2	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-2.2	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-3.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-3.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-3.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-3.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-4.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-4.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-4.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-4.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-5.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-5.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-5.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-5.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-6.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-6.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-6.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-6.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-7.2	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-7.2	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-7.2	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-7.2	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-8.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-8.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-8.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-8.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage

SGS Internal Chain of Custody

Page 2 of 2

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Received: 02/15/20

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD3305-9.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-9.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-9.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-9.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-10.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-10.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-10.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-10.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-10.2	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-10.2	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-10.2	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-10.2	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-10.4	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-10.4	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-10.4	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-10.4	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-11.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-11.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-11.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-11.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage
JD3305-12.1	Secured Storage	Edward Durner	02/18/20 14:46	Retrieve from Storage
JD3305-12.1	Edward Durner	GCMSL	02/18/20 14:46	Load on Instrument
JD3305-12.1	GCMSL	Edward Durner	02/19/20 15:34	Unload from Instrument
JD3305-12.1	Edward Durner	Secured Storage	02/19/20 15:34	Return to Storage

MS Volatiles**QC Data Summaries**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports



Method Blank Summary

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL9424-MB	L319840.D	1	02/18/20	ED	n/a	n/a	VL9424

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3305-1, JD3305-2, JD3305-3, JD3305-4, JD3305-5, JD3305-6, JD3305-7, JD3305-8, JD3305-9, JD3305-10, JD3305-11, JD3305-12

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 80-120%
17060-07-0	1,2-Dichloroethane-D4	90% 81-124%
2037-26-5	Toluene-D8	101% 80-120%
460-00-4	4-Bromofluorobenzene	94% 80-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A8686-MB	2A200806.D	1	02/19/20	ED	n/a	n/a	V2A8686

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3305-2

6.1.2
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CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No. Surrogate Recoveries**Limits**

1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	100%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	100%	80-120%

CAS No. Tentatively Identified Compounds**R.T. Est. Conc. Units Q**

Total TIC, Volatile 0 ug/l

Blank Spike Summary

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL9424-BS	L319838.D	1	02/18/20	ED	n/a	n/a	VL9424

The QC reported here applies to the following samples:**Method:** SW846 8260C

JD3305-1, JD3305-2, JD3305-3, JD3305-4, JD3305-5, JD3305-6, JD3305-7, JD3305-8, JD3305-9, JD3305-10, JD3305-11, JD3305-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	51.4	103	79-120
107-06-2	1,2-Dichloroethane	50	45.8	92	78-126
75-35-4	1,1-Dichloroethene	50	52.2	104	69-126
156-59-2	cis-1,2-Dichloroethene	50	53.3	107	80-120
156-60-5	trans-1,2-Dichloroethene	50	53.6	107	76-120
100-41-4	Ethylbenzene	50	51.8	104	80-120
75-09-2	Methylene chloride	50	54.4	109	77-120
127-18-4	Tetrachloroethene	50	56.0	112	70-131
108-88-3	Toluene	50	54.3	109	80-120
71-55-6	1,1,1-Trichloroethane	50	50.0	100	81-128
79-00-5	1,1,2-Trichloroethane	50	53.8	108	83-118
79-01-6	Trichloroethene	50	54.3	109	80-120
75-01-4	Vinyl chloride	50	56.4	113	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	80-120%
17060-07-0	1,2-Dichloroethane-D4	93%	81-124%
2037-26-5	Toluene-D8	93%	80-120%
460-00-4	4-Bromofluorobenzene	97%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2A8686-BS	2A200804.D	1	02/19/20	ED	n/a	n/a	V2A8686

The QC reported here applies to the following samples:**Method:** SW846 8260C

JD3305-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	51.9	104	79-120
107-06-2	1,2-Dichloroethane	50	47.7	95	78-126
75-35-4	1,1-Dichloroethene	50	51.4	103	69-126
156-59-2	cis-1,2-Dichloroethene	50	52.2	104	80-120
156-60-5	trans-1,2-Dichloroethene	50	51.4	103	76-120
100-41-4	Ethylbenzene	50	51.7	103	80-120
75-09-2	Methylene chloride	50	51.1	102	77-120
127-18-4	Tetrachloroethene	50	51.8	104	70-131
108-88-3	Toluene	50	51.2	102	80-120
79-00-5	1,1,2-Trichloroethane	50	50.4	101	83-118
79-01-6	Trichloroethene	50	51.9	104	80-120
75-01-4	Vinyl chloride	50	50.0	100	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	99%	81-124%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	99%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD3305-10MS	L319845.D	1	02/18/20	ED	n/a	n/a	VL9424
JD3305-10MSD	L319846.D	1	02/18/20	ED	n/a	n/a	VL9424
JD3305-10	L319841.D	1	02/18/20	ED	n/a	n/a	VL9424

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3305-1, JD3305-2, JD3305-3, JD3305-4, JD3305-5, JD3305-6, JD3305-7, JD3305-8, JD3305-9, JD3305-10, JD3305-11, JD3305-12

CAS No.	Compound	JD3305-10		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	ND		50	52.7	105	50	52.0	104	1	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	45.1	90	50	44.9	90	0	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	58.3	117	50	58.1	116	0	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	53.6	107	50	53.3	107	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	55.4	111	50	56.4	113	2	70-126/11
100-41-4	Ethylbenzene	ND		50	52.1	104	50	52.2	104	0	51-140/20
75-09-2	Methylene chloride	ND		50	55.2	110	50	55.0	110	0	73-125/13
127-18-4	Tetrachloroethene	ND		50	56.4	113	50	58.1	116	3	61-139/11
108-88-3	Toluene	ND		50	53.2	106	50	54.1	108	2	60-135/10
71-55-6	1,1,1-Trichloroethane	ND		50	51.9	104	50	52.2	104	1	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	51.1	102	50	51.3	103	0	78-121/11
79-01-6	Trichloroethene	ND		50	55.4	111	50	56.8	114	2	62-141/10
75-01-4	Vinyl chloride	ND		50	64.2	128	50	63.4	127	1	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD3305-10	Limits
1868-53-7	Dibromofluoromethane	96%	93%	93%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	92%	90%	81-124%
2037-26-5	Toluene-D8	94%	95%	99%	80-120%
460-00-4	4-Bromofluorobenzene	96%	96%	95%	80-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD3162-1MS	2A200814.D	10	02/19/20	ED	n/a	n/a	V2A8686
JD3162-1MSD	2A200815.D	10	02/19/20	ED	n/a	n/a	V2A8686
JD3162-1 ^a	2A200812.D	10	02/19/20	ED	n/a	n/a	V2A8686

The QC reported here applies to the following samples:

Method: SW846 8260C

JD3305-2

CAS No.	Compound	JD3162-1		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	ND		500	474	95	500	484	97	2	73-126/11
107-06-2	1,2-Dichloroethane	ND		500	447	89	500	450	90	1	72-131/11
75-35-4	1,1-Dichloroethene	ND		500	518	104	500	520	104	0	63-136/14
156-59-2	cis-1,2-Dichloroethene	38.6		500	519	96	500	522	97	1	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		500	481	96	500	490	98	2	70-126/11
100-41-4	Ethylbenzene	ND		500	487	97	500	494	99	1	51-140/20
75-09-2	Methylene chloride	ND		500	482	96	500	485	97	1	73-125/13
127-18-4	Tetrachloroethene	4920	E	500	4940	4* ^b	500	4920	0* ^b	0	61-139/11
108-88-3	Toluene	ND		500	478	96	500	483	97	1	60-135/10
79-00-5	1,1,2-Trichloroethane	ND		500	481	96	500	485	97	1	78-121/11
79-01-6	Trichloroethene	112		500	578	93	500	583	94	1	62-141/10
75-01-4	Vinyl chloride	ND		500	526	105	500	530	106	1	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JD3162-1	Limits
1868-53-7	Dibromofluoromethane	104%	103%	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	98%	81-124%
2037-26-5	Toluene-D8	100%	101%	99%	80-120%
460-00-4	4-Bromofluorobenzene	101%	99%	100%	80-120%

(a) Dilution required due to high concentration of target compound.

(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

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Instrument Performance Check (BFB)

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2A8671-BFB	Injection Date: 02/04/20
Lab File ID: 2A200465.D	Injection Time: 15:37
Instrument ID: GCMS2A	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	17057	17.3	Pass
75	30.0 - 60.0% of mass 95	45730	46.3	Pass
95	Base peak, 100% relative abundance	98709	100.0	Pass
96	5.0 - 9.0% of mass 95	6674	6.76	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	87456	88.6	Pass
175	5.0 - 9.0% of mass 174	6650	6.74	(7.60) ^a Pass
176	95.0 - 101.0% of mass 174	86488	87.6	(98.9) ^a Pass
177	5.0 - 9.0% of mass 176	5598	5.67	(6.47) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A8671-IC8671	2A200466.D	02/04/20	16:12	00:35	Initial cal 0.2
V2A8671-IC8671	2A200467.D	02/04/20	16:41	01:04	Initial cal 0.5
V2A8671-IC8671	2A200468.D	02/04/20	17:09	01:32	Initial cal 1
V2A8671-IC8671	2A200469.D	02/04/20	17:38	02:01	Initial cal 2
V2A8671-IC8671	2A200470.D	02/04/20	18:06	02:29	Initial cal 4
V2A8671-IC8671	2A200471.D	02/04/20	18:35	02:58	Initial cal 8
V2A8671-IC8671	2A200472.D	02/04/20	19:04	03:27	Initial cal 20
V2A8671-ICC8671	2A200473.D	02/04/20	19:32	03:55	Initial cal 50
V2A8671-IC8671	2A200474.D	02/04/20	20:01	04:24	Initial cal 100
V2A8671-IC8671	2A200475.D	02/04/20	20:30	04:53	Initial cal 200
V2A8671-ICV8671	2A200478.D	02/04/20	21:55	06:18	Initial cal verification 50
V2A8671-ICV8671	2A200479.D	02/04/20	22:24	06:47	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V2A8686-BFB	Injection Date:	02/19/20
Lab File ID:	2A200803.D	Injection Time:	07:12
Instrument ID:	GCMS2A		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	23824	18.1	Pass
75	30.0 - 60.0% of mass 95	62053	47.2	Pass
95	Base peak, 100% relative abundance	131405	100.0	Pass
96	5.0 - 9.0% of mass 95	9039	6.88	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	108331	82.4	Pass
175	5.0 - 9.0% of mass 174	8035	6.11	(7.42) ^a Pass
176	95.0 - 101.0% of mass 174	105995	80.7	(97.8) ^a Pass
177	5.0 - 9.0% of mass 176	6895	5.25	(6.51) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2A8686-CC8671	2A200803.D	02/19/20	07:12	00:00	Continuing cal 20
V2A8686-BS	2A200804.D	02/19/20	07:47	00:35	Blank Spike
V2A8686-MB	2A200806.D	02/19/20	08:45	01:33	Method Blank
ZZZZZZ	2A200807.D	02/19/20	10:07	02:55	(unrelated sample)
ZZZZZZ	2A200808.D	02/19/20	10:36	03:24	(unrelated sample)
ZZZZZZ	2A200809.D	02/19/20	11:05	03:53	(unrelated sample)
ZZZZZZ	2A200811.D	02/19/20	12:03	04:51	(unrelated sample)
JD3162-1	2A200812.D	02/19/20	12:32	05:20	(used for QC only; not part of job JD3305)
ZZZZZZ	2A200813.D	02/19/20	13:01	05:49	(unrelated sample)
JD3162-1MS	2A200814.D	02/19/20	13:30	06:18	Matrix Spike
JD3162-1MSD	2A200815.D	02/19/20	13:59	06:47	Matrix Spike Duplicate
JD3305-2	2A200817.D	02/19/20	15:10	07:58	HSSER-RAMW07-021320
ZZZZZZ	2A200818.D	02/19/20	15:40	08:28	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: VL9325-BFB	Injection Date: 11/20/19
Lab File ID: L317672.D	Injection Time: 15:51
Instrument ID: GCMSL	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	10571	16.8	Pass
75	30.0 - 60.0% of mass 95	28501	45.4	Pass
95	Base peak, 100% relative abundance	62744	100.0	Pass
96	5.0 - 9.0% of mass 95	4181	6.66	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	55859	89.0	Pass
175	5.0 - 9.0% of mass 174	4489	7.15	(8.04) ^a Pass
176	95.0 - 101.0% of mass 174	55339	88.2	(99.1) ^a Pass
177	5.0 - 9.0% of mass 176	3731	5.95	(6.74) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL9325-IC9325	L317673.D	11/20/19	16:24	00:33	Initial cal 0.2
VL9325-IC9325	L317674.D	11/20/19	16:51	01:00	Initial cal 0.5
VL9325-IC9325	L317675.D	11/20/19	17:18	01:27	Initial cal 1
ZZZZZZ	L317675.D	11/20/19	17:18	01:27	(unrelated sample)
VL9325-IC9325	L317676.D	11/20/19	17:45	01:54	Initial cal 2
VL9325-IC9325	L317677.D	11/20/19	18:12	02:21	Initial cal 4
VL9325-IC9325	L317678.D	11/20/19	18:39	02:48	Initial cal 8
VL9325-IC9325	L317679.D	11/20/19	19:06	03:15	Initial cal 20
VL9325-ICC9325	L317680.D	11/20/19	19:33	03:42	Initial cal 50
VL9325-IC9325	L317681.D	11/20/19	20:00	04:09	Initial cal 100
VL9325-IC9325	L317682.D	11/20/19	20:28	04:37	Initial cal 200
VL9325-ICV9325	L317685.D	11/20/19	21:49	05:58	Initial cal verification 50
VL9325-ICV9325	L317686.D	11/20/19	22:16	06:25	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VL9325-BFB2	Injection Date:	11/21/19
Lab File ID:	L317694.D	Injection Time:	19:11
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	10624	16.5	Pass
75	30.0 - 60.0% of mass 95	29000	45.1	Pass
95	Base peak, 100% relative abundance	64288	100.0	Pass
96	5.0 - 9.0% of mass 95	4354	6.77	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	57800	89.9	Pass
175	5.0 - 9.0% of mass 174	4588	7.14	(7.94) ^a Pass
176	95.0 - 101.0% of mass 174	55637	86.5	(96.3) ^a Pass
177	5.0 - 9.0% of mass 176	3963	6.16	(7.12) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL9325-ICV9325	L317695.D	11/21/19	20:40	01:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VL9424-BFB	Injection Date:	02/18/20
Lab File ID:	L319837.D	Injection Time:	06:51
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	7077	15.2	Pass
75	30.0 - 60.0% of mass 95	19625	42.0	Pass
95	Base peak, 100% relative abundance	46712	100.0	Pass
96	5.0 - 9.0% of mass 95	3067	6.57	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	44992	96.3	Pass
175	5.0 - 9.0% of mass 174	3384	7.24	(7.52) ^a Pass
176	95.0 - 101.0% of mass 174	43830	93.8	(97.4) ^a Pass
177	5.0 - 9.0% of mass 176	3045	6.52	(6.95) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL9424-CC9325	L319837.D	02/18/20	06:51	00:00	Continuing cal 20
VL9424-BS	L319838.D	02/18/20	07:27	00:36	Blank Spike
VL9424-MB	L319840.D	02/18/20	08:21	01:30	Method Blank
JD3305-10	L319841.D	02/18/20	08:53	02:02	HSSER-RAMW02-021420
ZZZZZZ	L319842.D	02/18/20	09:20	02:29	(unrelated sample)
ZZZZZZ	L319843.D	02/18/20	09:47	02:56	(unrelated sample)
ZZZZZZ	L319844.D	02/18/20	10:14	03:23	(unrelated sample)
JD3305-10MS	L319845.D	02/18/20	10:41	03:50	Matrix Spike
JD3305-10MSD	L319846.D	02/18/20	11:08	04:17	Matrix Spike Duplicate
JD3305-12	L319848.D	02/18/20	12:02	05:11	HSSER-TBLK02-021220
JD3305-1	L319849.D	02/18/20	12:29	05:38	HSSER-RAMW08-021320
JD3305-3	L319850.D	02/18/20	12:56	06:05	HSSER-RAMW06-021320
JD3305-4	L319851.D	02/18/20	13:23	06:32	HSSER-RAMW05-021320
JD3305-5	L319852.D	02/18/20	13:50	06:59	HSSER-RAMW04-021320
JD3305-6	L319853.D	02/18/20	14:17	07:26	HSSER-EBLK02-021320
JD3305-7	L319854.D	02/18/20	14:44	07:53	HSSER-RAMW03-021420
JD3305-8	L319855.D	02/18/20	15:11	08:20	HSSER-RAMW01-021420
JD3305-9	L319856.D	02/18/20	15:38	08:47	HSSER-FBLK02-021420
JD3305-11	L319857.D	02/18/20	16:05	09:14	HSSER-DUP02-021420
ZZZZZZ	L319858.D	02/18/20	16:32	09:41	(unrelated sample)
JD3305-2	L319859.D	02/18/20	16:59	10:08	HSSER-RAMW07-021320
ZZZZZZ	L319860.D	02/18/20	17:26	10:35	(unrelated sample)
ZZZZZZ	L319861.D	02/18/20	17:53	11:02	(unrelated sample)
ZZZZZZ	L319862.D	02/18/20	18:20	11:29	(unrelated sample)

Internal Standard Area Summary

Page 1 of 1

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2A8686-CC8671	Injection Date:	02/19/20
Lab File ID:	2A200803.D	Injection Time:	07:12
Instrument ID:	GCMS2A	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	91637	7.30	317966	9.56	480069	10.49
Upper Limit ^a	183274	7.80	635932	10.06	960138	10.99
Lower Limit ^b	45819	6.80	158983	9.06	240035	9.99

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
V2A8686-BS	84791	7.30	309218	9.57	472093	10.49
V2A8686-MB	83059	7.30	304353	9.56	457251	10.49
ZZZZZZ	51523	7.30	223467	9.56	338146	10.49
ZZZZZZ	67545	7.30	292780	9.56	441964	10.49
ZZZZZZ	79850	7.30	306404	9.57	465872	10.49
ZZZZZZ	77753	7.30	315293	9.56	476912	10.49
JD3162-1	78697	7.30	313651	9.56	478585	10.49
ZZZZZZ	79318	7.30	310082	9.57	470300	10.49
JD3162-1MS	80311	7.30	315356	9.56	482926	10.49
JD3162-1MSD	83213	7.30	312140	9.56	477595	10.49
JD3305-2	100138	7.30	305179	9.57	461880	10.49
ZZZZZZ	91245	7.30	310057	9.57	476431	10.49

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	VL9424-CC9325	Injection Date:	02/18/20
Lab File ID:	L319837.D	Injection Time:	06:51
Instrument ID:	GCMSL	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	99784	3.05	181427	4.26	240688	4.83
Upper Limit ^a	199568	3.55	362854	4.76	481376	5.33
Lower Limit ^b	49892	2.55	90714	3.76	120344	4.33

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
VL9424-BS	97058	3.05	170068	4.27	232405	4.83
VL9424-MB	112604	3.05	210477	4.27	274972	4.83
JD3305-10	112609	3.05	210063	4.27	277781	4.83
ZZZZZZ	114349	3.05	211401	4.27	276426	4.83
ZZZZZZ	107733	3.05	173762	4.26	221447	4.83
ZZZZZZ	114003	3.05	171739	4.26	221880	4.83
JD3305-10MS	94536	3.05	160727	4.27	220109	4.83
JD3305-10MSD	91451	3.05	163327	4.26	223758	4.83
JD3305-12	113412	3.05	208510	4.26	274918	4.83
JD3305-1	122585	3.05	206092	4.26	276636	4.83
JD3305-3	120467	3.05	208587	4.26	275793	4.83
JD3305-4	116456	3.05	206722	4.26	278609	4.83
JD3305-5	122440	3.05	211579	4.26	282266	4.83
JD3305-6	119036	3.04	208485	4.26	275594	4.83
JD3305-7	114123	3.05	207479	4.26	276039	4.83
JD3305-8	109542	3.05	209754	4.27	278659	4.83
JD3305-9	115227	3.05	207025	4.27	272954	4.83
JD3305-11	114901	3.05	205666	4.27	269828	4.83
ZZZZZZ	107620	3.05	188896	4.26	241268	4.83
JD3305-2	111701	3.05	201822	4.27	267928	4.83
ZZZZZZ	111879	3.05	194670	4.27	245392	4.83
ZZZZZZ	114114	3.05	195506	4.27	258628	4.84
ZZZZZZ	116232	3.05	195851	4.27	255197	4.83
					220324	7.23
					101814	9.42

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Page 1 of 1

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD3305-1	L319849.D	95	90	100	95
JD3305-2	2A200817.D	103	100	100	101
JD3305-2	L319859.D	94	89	100	92
JD3305-3	L319850.D	94	89	101	93
JD3305-4	L319851.D	97	89	100	96
JD3305-5	L319852.D	94	91	100	93
JD3305-6	L319853.D	94	92	101	95
JD3305-7	L319854.D	93	88	101	94
JD3305-8	L319855.D	92	88	101	95
JD3305-9	L319856.D	93	90	104	94
JD3305-10	L319841.D	93	90	99	95
JD3305-11	L319857.D	89	90	102	95
JD3305-12	L319848.D	93	90	98	94
JD3162-1MS	2A200814.D	104	98	100	101
JD3162-1MSD	2A200815.D	103	98	101	99
JD3305-10MS	L319845.D	96	94	94	96
JD3305-10MSD	L319846.D	93	92	95	96
V2A8686-BS	2A200804.D	102	99	99	99
V2A8686-MB	2A200806.D	101	100	98	100
VL9424-BS	L319838.D	93	93	93	97
VL9424-MB	L319840.D	91	90	101	94

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane

80-120%

S2 = 1,2-Dichloroethane-D4

81-124%

S3 = Toluene-D8

80-120%

S4 = 4-Bromofluorobenzene

80-120%

6.6.1
6

Initial Calibration Summary

Page 1 of 5

Job Number: JD3305

Sample: V2A8671-ICC8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200473.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report Instrumen

Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 Last Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

Calibration Files

4	=2A200470.D	8	=2A200471.D	0.5	=2A200467.D	50	=2A200473.D
100	=2A200474.D	1	=2A200468.D	200	=2A200475.D	20	=2A200472.D
2	=2A200469.D	0.2	=2A200466.D	=		=	

Compound

	4	8	0.5	50	100	1	200	20	2	0.2	Avg	%RSD
--	---	---	-----	----	-----	---	-----	----	---	-----	-----	------

1)	I	tert butyl alcohol-d9	-----ISTD-----											
2)	ethanol		0.142	0.158	0.152	0.161	0.115	0.153	0.148	0.176	0.150	11.77		
3)	tertiary butyl alcohol		1.315	1.393	1.432	1.536	1.476	1.402	1.532		1.441	5.55		
4)	1,4-dioxane		0.125	0.131	0.135	0.147	0.142	0.137	0.142		0.137	5.50		
5)	I	pentafluorobenzene	-----ISTD-----											
6)	chlorodifluoromethane		*This compound does not meet initial calibration criteria*								0.702	4.51		
7)	dichlorodifluoromethane		0.725	0.692	0.656	0.698	0.735	0.700	0.654	0.714	0.742			
8)	chloromethane		0.817	0.830	0.792	0.800	0.496	0.751	0.817	0.719		0.753	14.63	
9)	vinyl chloride		0.916	0.926	0.903	0.892	0.888	0.992	0.834	0.931	0.891		0.908	4.66
10)	1,3-butadiene		0.917	0.880	0.770	0.877	0.881	0.864	0.829	0.920	0.848		0.865	5.32
11)	bromomethane		0.513	0.495	0.503	0.539	0.459	0.478	0.515	0.539		0.505	5.51	
12)	chloroethane		0.572	0.584	0.541	0.528	0.690	0.488	0.568	0.586		0.570	10.33	
13)	vinyl bromide		0.449	0.444	0.458	0.446	0.448	0.431	0.427	0.452	0.439		0.444	2.21
14)	trichlorofluoromethane		0.466	0.482	0.383	0.474	0.486	0.409	0.460	0.492	0.449		0.456	8.12
15)	ethyl ether		0.909	0.928	0.914	0.919		0.869	0.922	0.852		0.902	3.23	
16)	2-chloropropane		0.278	0.287	0.301	0.319	0.280	0.299	0.306	0.344		0.302	7.35	
17)	acrolein		0.224	0.235	0.237	0.252		0.236	0.240	0.255		0.240	4.49	
18)	freon 113		0.063	0.073	0.084	0.091		0.086	0.084			0.080	12.85	
19)	1,1-dichloroethene		0.408	0.421	0.430	0.458		0.423	0.427	0.382		0.421	5.47	
20)	acetone		0.484	0.497	0.395	0.496	0.526	0.471	0.487	0.499	0.532		0.488	8.16
21)	acetonitrile		0.111	0.115	0.117	0.123	0.104	0.114	0.117	0.137		0.117	8.06	
22)	iodomethane		0.056	0.058	0.059	0.062		0.058	0.060	0.066		0.060	5.48	
			0.734	0.738	0.742	0.797	0.705	0.739	0.747	0.860		0.758	6.42	

6.7.1
6

Initial Calibration Summary

Page 2 of 5

Job Number: JD3305

Sample: V2A8671-ICC8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200473.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

23)	carbon disulfide	1.457 1.419	1.432 1.525	1.441 1.603	1.479	4.79
24)	methylene chloride	0.565 0.569	0.568 0.572	0.606 0.582	0.565 0.571	0.690
25)	methyl acetate	0.342 0.341	0.351 0.377	0.354 0.360	0.386	0.359 4.79
26)	methyl tert-butyl ether	1.420 1.412	1.325 1.425	1.468 1.441	1.357 1.442	1.740 1.267
27)	trans-1,2-dichloroethene	0.553 0.543	0.496 0.543	0.581 0.570	0.542 0.546	0.650
28)	hexane	0.821 0.832	0.862 0.901	0.607 0.843	0.846 0.789	0.812 10.99
29)	di-isopropyl ether	1.938 1.975	1.923 1.987	2.069 2.027	1.891 2.020	2.320 1.881
30)	ethyl tert-butyl ether	1.792 1.793	1.759 1.790	1.841 1.814	1.679 1.828	2.132 1.796
31)	2-butanone	0.043 0.044	0.049 0.052	0.049 0.048	0.050	0.048 6.65
32)	1,1-dichloroethane	1.044 1.034	1.039 1.037	1.087 1.075	1.010 1.044	1.206
33)	chloroprene	0.830 0.818	0.755 0.862	0.908 0.808	0.808 0.852	0.852 0.944
34)	acrylonitrile	0.141 0.175	0.175 0.189	0.178 0.177	0.169	0.172 8.70
35)	vinyl acetate	0.092 0.094	0.103 0.112	0.108 0.105	0.103	7.55
36)	ethyl acetate	0.064 0.066	0.071 0.076	0.073 0.075	0.071	7.00
37)	2,2-dichloropropane	0.850 0.800	0.836 0.808	0.847 0.775	0.776 0.834	0.989
38)	cis-1,2-dichloroethene	0.617 0.618	0.621 0.653	0.589 0.615	0.623 0.751	0.636 7.81
39)	propionitrile	0.051 0.052	0.054 0.057	0.044 0.053	0.055 0.064	0.054 10.33
40)	bromochloromethane	0.379 0.385	0.390 0.414	0.341 0.391	0.393 0.443	0.392 7.49
41)	tetrahydrofuran	0.128 0.118	0.126 0.136	0.127 0.130	0.130	0.128 4.20
42)	chloroform	1.015 0.986	0.937 1.009	1.060 1.016	0.988 1.032	1.189 1.048
43)	tert-butyl formate	0.420 0.439	0.447 0.482	0.444 0.457	0.512	0.457 6.66
44)	isobutyl alcohol	0.016 0.015	0.017 0.019	0.018 0.018	0.017	9.81
45)	dibromofluoromethane (s)	0.453 0.455	0.455 0.453	0.451 0.453	0.458 0.460	0.450 0.456
46)	methacrylonitrile	0.173 0.178	0.189 0.204	0.194 0.191	0.209	0.191 6.79
47)	1,1,1-trichloroethane	0.874 0.889	0.811 0.896	0.939 0.854	0.876 0.901	1.011
48)	cyclohexane	0.848 0.828	0.799 0.827	0.785 0.822	0.793	0.815 2.77
49)	1,1-dichloropropene	0.764 0.766	0.766 0.780	0.825 0.727	0.775 0.788	0.890
50)	tert-amyl alcohol	0.020 0.020	0.021 0.023	0.022 0.021	0.021	5.78
51)	carbon tetrachloride	0.785 0.812	0.810 0.853	0.760 0.801	0.805 0.890	0.814 4.94
52)	I 1,4-difluorobenzene	-----ISTD-----				

6.7.1
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Initial Calibration Summary**Job Number:** JD3305**Sample:** V2A8671-ICC8671**Account:** UTC United Technologies Corporation**Lab FileID:** 2A200473.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

53)	1,2-dichloroethane-d4 (s)	0.335 0.336 0.332 0.330 0.328 0.335 0.322 0.332 0.333 0.334 0.332 0.332 1.24
54)	2,2,4-trimethylpentane	1.457 1.449 1.496 1.543 1.155 1.387 1.470 1.399 1.419 8.32
55)	tert-amyl methyl ether	1.129 1.146 1.070 1.131 1.152 1.136 1.029 1.141 1.352 1.071 1.136 7.61
56)	n-butyl alcohol	0.007 0.007 0.008 0.008 0.008 0.008 0.008 0.008 0.008 6.70
57)	benzene	1.480 1.489 1.624 1.481 1.534 1.493 1.392 1.480 1.736 1.423 1.513 6.59
58)	heptane	0.297 0.306 0.322 0.338 0.232 0.314 0.316 0.291 0.302 10.56
59)	isopropyl acetate	0.061 0.064 0.072 0.076 0.072 0.070 0.069 8.10
60)	1,2-dichloroethane	0.515 0.507 0.568 0.503 0.521 0.539 0.481 0.508 0.611 0.528 7.49
61)	trichloroethene	0.393 0.378 0.365 0.389 0.409 0.383 0.384 0.383 0.452 0.393 6.40
62)	ethyl acrylate	0.380 0.406 0.426 0.445 0.344 0.413 0.425 0.459 0.412 8.84
63)	2-nitropropane	0.066 0.072 0.077 0.082 0.078 0.071 0.075 7.65
64)	2-chloroethyl vinyl ether	0.164 0.169 0.144 0.180 0.188 0.166 0.173 0.176 0.198 0.173 8.94
65)	methyl methacrylate	0.072 0.081 0.085 0.089 0.085 0.083 0.079 0.082 6.63
66)	1,2-dichloropropane	0.417 0.399 0.370 0.412 0.428 0.401 0.394 0.408 0.454 0.409 5.68
67)	methylcyclohexane	0.643 0.643 0.661 0.689 0.471 0.631 0.641 0.618 0.625 10.50
68)	dibromomethane	0.225 0.223 0.230 0.240 0.199 0.226 0.228 0.260 0.229 7.51
69)	bromodichloromethane	0.525 0.521 0.484 0.534 0.563 0.524 0.522 0.533 0.604 0.485 0.530 6.60
70)	epichlorohydrin	0.028 0.029 0.030 0.031 0.030 0.030 0.032 0.030 4.45
71)	cis-1,3-dichloropropene	0.613 0.628 0.555 0.649 0.678 0.587 0.628 0.644 0.740 0.636 8.33
72)	4-methyl-2-pentanone	0.113 0.118 0.109 0.120 0.123 0.116 0.115 0.119 0.143 0.120 8.19
73)	3-methyl-1-butanol	0.006 0.006 0.007 0.008 0.007 0.007 0.007 0.007 7.56
74)	I chlorobenzene-d5	-----ISTD-----
75)	toluene-d8 (s)	1.252 1.261 1.262 1.271 1.297 1.266 1.323 1.261 1.258 1.241 1.269 1.88
76)	toluene	1.045 1.009 1.063 1.042 1.109 1.080 1.059 1.032 1.206 1.040 1.069 5.20
77)	trans-1,3-dichloropropene	0.632 0.623 0.559 0.656 0.699 0.585 0.668 0.649 0.722 0.603 0.640 7.82
78)	ethyl methacrylate	0.450 0.466 0.495 0.530 0.408 0.514 0.485 0.535 0.485 8.87
79)	1,1,2-trichloroethane	0.296 0.305 0.283 0.312 0.332 0.273 0.322 0.313 0.376 0.313 9.63
80)	2-hexanone	0.119 0.124 0.128 0.133 0.110 0.129 0.125 0.138 0.126 6.82
81)	tetrachloroethene	0.464 0.457 0.452 0.474 0.504 0.480 0.485 0.472 0.542 0.481 5.74
82)	1,3-dichloropropane	0.587 0.599 0.559 0.608 0.644 0.606 0.612 0.600 0.687 0.611 5.89

6.7.1
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Initial Calibration Summary**Job Number:** JD3305**Sample:** V2A8671-ICC8671**Account:** UTC United Technologies Corporation**Lab FileID:** 2A200473.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

83)	butyl acetate	0.237 0.244 0.255 0.273	0.265 0.254 0.272	0.257	5.41
84)	dibromochloromethane	0.427 0.424 0.441 0.464 0.497 0.410 0.479 0.449 0.510		0.456	7.53
85)	1,2-dibromoethane	0.398 0.396 0.357 0.421 0.438 0.356 0.422 0.413 0.469		0.408	8.90
86)	n-butyl ether	1.906 1.890 1.696 1.924 1.994 1.833 1.804 1.921 2.178 1.629	1.877	8.15	
87)	chlorobenzene	1.134 1.129 1.146 1.159 1.210 1.167 1.135 1.143 1.370 1.022	1.161	7.52	
88)	1,1,1,2-tetrachloroethane	0.420 0.432 0.419 0.450 0.481 0.399 0.452 0.439 0.505		0.444	7.38
89)	ethylbenzene	1.943 1.916 1.987 1.915 1.989 2.007 1.779 1.930 2.288 1.709	1.946	7.85	
90)	m,p-xylene	0.732 0.746 0.748 0.750 0.789 0.710 0.738 0.745 0.864 0.629	0.745	7.89	
91)	o-xylene	1.556 1.554 1.576 1.553 1.614 1.535 1.472 1.559 1.854 1.553	1.583	6.41	
92)	styrene	1.198 1.220 1.131 1.231 1.296 1.146 1.196 1.238 1.379 0.966	1.200	9.07	
93)	n-amyl acetate	0.272 0.258 0.278 0.294 0.220 0.290 0.268 0.291		0.271	8.98
94)	bromoform	0.252 0.261 0.253 0.292 0.316 0.238 0.307 0.280 0.305		0.278	10.12
95)	butyl acrylate	0.711 0.772 0.827 0.866 0.671 0.825 0.797 0.865		0.792	8.91
96)	isopropylbenzene	1.875 1.879 1.852 1.889 1.960 1.900 1.777 1.887 2.192 1.687	1.890	6.88	
97)	cis-1,4-dichloro-2-butene	0.132 0.145 0.169 0.180 0.177 0.153		0.159	11.97
98)	I 1,4-dichlorobenzene-d	-----ISTD-----			
99)	4-bromofluorobenzene (s)	0.944 0.942 0.937 0.946 0.946 0.942 0.951 0.944 0.938 0.937	0.943	0.48	
100)	bromobenzene	1.000 0.985 0.974 1.006 1.042 0.901 0.969 1.015 1.194 0.855	0.994	9.00	
101)	1,1,2,2-tetrachloroethane	0.859 0.834 0.735 0.877 0.906 0.789 0.847 0.857 1.014		0.858	8.99
102)	trans-1,4-dichloro-2-butene	0.192 0.203 0.221 0.234 0.226 0.217 0.216		0.216	6.54
103)	1,2,3-trichloropropane	0.206 0.218 0.221 0.229 0.216 0.220 0.249		0.223	6.05
104)	n-propylbenzene	4.383 4.343 4.197 4.299 4.370 4.305 3.810 4.362 5.061 4.120	4.325	7.20	
105)	2-chlorotoluene	0.926 0.903 0.868 0.943 0.987 0.923 0.916 0.925 1.099		0.943	7.04
106)	4-chlorotoluene	2.689 2.635 2.608 2.633 2.734 2.642 2.477 2.658 3.094 2.305	2.647	7.53	
107)	1,3,5-trimethylbenzene	3.036 3.033 2.885 3.088 3.186 2.936 2.834 3.110 3.486 2.755	3.035	6.82	
108)	tert-butylbenzene	2.606 2.540 2.475 2.635 2.703 2.545 2.454 2.623 2.914 2.168	2.566	7.46	
109)	1,2,4-trimethylbenzene	3.129 3.051 2.839 3.068 3.167 2.883 2.839 3.078 3.562 2.718	3.034	7.83	
110)	sec-butylbenzene	3.933 3.978 3.709 3.933 4.024 3.821 3.523 3.953 4.426 3.632	3.893	6.40	
111)	1,3-dichlorobenzene	1.765 1.812 1.760 1.816 1.885 1.755 1.715 1.812 2.117 1.537	1.797	8.06	
112)	p-isopropyltoluene	3.296 3.267 3.017 3.323 3.419 3.145 3.029 3.348 3.621 2.857	3.232	6.92	

6.7.1
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Initial Calibration Summary**Job Number:** JD3305**Sample:** V2A8671-ICC8671**Account:** UTC United Technologies Corporation**Lab FileID:** 2A200473.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

113)	benzyl chloride	1.561 1.517 1.465 1.657 1.724 1.465 1.599 1.606 1.886	1.609	8.35
114)	1,4-dichlorobenzene	1.848 1.770 1.840 1.822 1.904 1.792 1.739 1.839 2.098 1.895	1.855	5.37
115)	1,2-dichlorobenzene	1.749 1.691 1.726 1.737 1.807 1.661 1.648 1.755 2.022 1.400	1.720	8.94
116)	n-butylbenzene	1.766 1.723 1.600 1.778 1.855 1.621 1.701 1.774 1.912 1.526	1.726	6.85
117)	1,2-dibromo-3-chloropropane	0.151 0.160 0.178 0.188 0.143 0.181 0.172 0.176	0.168	9.37
118)	1,3,5-trichlorobenzene	1.552 1.561 1.404 1.605 1.651 1.431 1.482 1.581 1.741 1.211	1.522	9.74
119)	1,2,4-trichlorobenzene	1.253 1.295 1.030 1.361 1.420 1.139 1.290 1.311 1.456 1.152	1.271	10.39
120)	hexachlorobutadiene	0.710 0.704 0.652 0.730 0.774 0.665 0.682 0.720 0.766 0.580	0.698	8.21
121)	naphthalene	2.064 2.162 1.775 2.383 2.473 1.891 2.263 2.301 2.357	2.185	10.74
122)	1,2,3-trichlorobenzene	1.037 1.080 1.028 1.161 1.221 1.003 1.102 1.117 1.180 0.982	1.091	7.30
123)	hexachloroethane	0.547 0.560 0.491 0.617 0.665 0.536 0.624 0.585 0.625	0.583	9.35
124)	2-ethylhexyl acrylate	0.518 0.811 0.978 0.926 0.633	0.773	25.16
		----- Linear regression ----- Coefficient = 0.9961		
		Response Ratio = -0.01768 + 0.95910 *A		
125)	2-methylnaphthalene	0.790 1.094 1.209 1.152 0.949	1.039	16.31
126)	bis(chloromethyl)ether		0.000	-1.00
127)	ethylenimine		0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2A8671.M Thu Feb 06 10:52:09 2020 MS2A

6.7.1
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Initial Calibration Verification

Job Number: JD3305

Sample: V2A8671-ICV8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200478.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V2A8671\2A200478.D Vial: 14
 Acq On : 4 Feb 2020 9:55 pm Operator: CHELSEAS
 Sample : ICV8671-50 Inst : Instrumen
 Misc : MS40388,V2A8671,w,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 Last Update : Thu Feb 06 10:48:34 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.	
<hr/>							
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	106	0.00	
2	ethanol	0.150	0.152	-1.3	107	0.00	
3	tertiary butyl alcohol	1.441	1.384	4.0	103	0.00	
4	1,4-dioxane	0.137	0.142	-3.6	112	0.00	
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane	0.753	0.621	17.5	82	0.00	
8	chloromethane	0.908	0.797	12.2	93	0.00	
9	viny chloride	0.865	0.776	10.3	92	0.00	
10	1,3-butadiene	0.505	0.639	-26.5	132	0.00	
11	bromomethane	0.570	0.624	-9.5	120	0.00	
12	chloroethane	0.444	0.386	13.1	90	-0.01	
13	vinyl bromide	0.456	0.528	-15.8	116	-0.01	
14	trichlorofluoromethane	0.902	0.852	5.5	97	0.00	
15	ethyl ether	0.302	0.307	-1.7	106	0.00	
16	2-chloropropane	0.240	0.238	0.8	105	0.00	
17	acrolein	0.080	0.082	-2.5	102	0.00	
18	freon 113	0.421	0.422	-0.2	102	0.00	
19	1,1-dichloroethene	0.488	0.479	1.8	101	0.00	
20	acetone	0.117	0.117	0.0	105	0.00	
21	acetonitrile			-----NA-----			
22	iodomethane	0.758	0.985	-29.9	138	0.00	
23	carbon disulfide	1.479	1.774	-19.9	129	0.00	
24	methylene chloride	0.588	0.574	2.4	104	0.00	
25	methyl acetate	0.359	0.335	6.7	99	0.00	
26	methyl tert butyl ether	1.430	1.388	2.9	102	0.00	
27	trans-1,2-dichloroethene	0.558	0.550	1.4	105	0.00	
28	hexane	0.812	0.672	17.2	81	0.00	
29	di-isopropyl ether	2.003	1.888	5.7	99	0.00	
30	ethyl tert-butyl ether	1.822	1.696	6.9	99	0.00	
31	2-butanone	0.048	0.048	0.0	102	0.00	
32	1,1-dichloroethane	1.064	1.052	1.1	106	0.00	
33	chloroprene	0.848	0.875	-3.2	106	0.00	
34	acrylonitrile			-----NA-----			
35	vinyl acetate	0.103	0.102	1.0	103	0.00	
36	ethyl acetate	0.071	0.067	5.6	97	0.00	
37	2,2-dichloropropane	0.835	0.756	9.5	97	0.00	
38	cis-1,2-dichloroethene	0.636	0.602	5.3	101	0.00	
39	propionitrile	0.054	0.062	-14.8	119	0.00	
40	bromochloromethane	0.392	0.392	0.0	105	0.00	
41	tetrahydrofuran	0.128	0.128	0.0	106	0.00	

Initial Calibration Verification

Job Number: JD3305

Sample: V2A8671-ICV8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200478.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

42	chloroform	1.028	1.007	2.0	104	0.00	9.40
43	tert-butyl formate	0.457	0.476	-4.2	111	0.00	9.44
44	isobutyl alcohol	0.017	0.017	0.0	103	0.00	9.80
45 S	dibromofluoromethane (s)	0.454	0.457	-0.7	105	0.00	9.59
46	methacrylonitrile	0.191	0.199	-4.2	110	0.00	9.23
47	1,1,1-trichloroethane	0.895	0.874	2.3	102	0.00	9.66
48	cyclohexane	0.815	0.773	5.2	101	0.00	9.76
49	1,1-dichloropropene	0.787	0.776	1.4	104	0.00	9.83
50	tert-amyl alcohol	0.021	0.021	0.0	103	0.00	9.96
51	carbon tetrachloride	0.814	0.814	0.0	105	0.00	9.85
52 I	1,4-difluorobenzene	1.000	1.000	0.0	106	0.00	10.49
53 S	1,2-dichloroethane-d4 (s)	0.332	0.327	1.5	105	0.00	10.01
54	2,2,4-trimethylpentane	1.419	1.404	1.1	100	0.00	10.17
55	tert-amyl methyl ether	1.136	1.009	11.2	95	0.00	10.16
56	n-butyl alcohol	0.008	0.008	0.0	102	0.00	10.54
57	benzene	1.513	1.465	3.2	105	0.00	10.07
58	heptane	0.302	0.297	1.7	98	0.00	10.33
59	isopropyl acetate	0.069	0.066	4.3	98	0.00	9.99
60	1,2-dichloroethane	0.528	0.482	8.7	102	0.00	10.10
61	trichloroethene	0.393	0.387	1.5	105	0.00	10.80
62	ethyl acrylate	0.412	0.401	2.7	100	0.00	10.79
63	2-nitropropane	0.075	0.078	-4.0	107	0.00	11.56
64	2-chloroethyl vinyl ether	0.173	0.185	-6.9	109	0.00	11.59
65	methyl methacrylate	0.082	0.084	-2.4	106	0.00	11.05
66	1,2-dichloropropane	0.409	0.396	3.2	102	0.00	11.09
67	methylcyclohexane	0.625	0.633	-1.3	102	0.00	11.09
68	dibromomethane	0.229	0.220	3.9	101	0.00	11.19
69	bromodichloromethane	0.530	0.512	3.4	102	0.00	11.35
70	epichlorohydrin	0.030	0.030	0.0	105	0.00	11.67
71	cis-1,3-dichloropropene	0.636	0.632	0.6	103	0.00	11.80
72	4-methyl-2-pentanone	0.120	0.116	3.3	102	0.00	11.91
73	3-methyl-1-butanol	0.007	0.007	0.0	102	0.00	11.91
74 I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	13.61
75 S	toluene-d8 (s)	1.269	1.285	-1.3	107	0.00	12.11
76	toluene	1.069	1.034	3.3	105	0.00	12.18
77	trans-1,3-dichloropropene	0.640	0.657	-2.7	106	0.00	12.37
78	ethyl methacrylate	0.485	0.508	-4.7	108	0.00	12.36
79	1,1,2-trichloroethane	0.313	0.314	-0.3	106	0.00	12.59
80	2-hexanone	0.126	0.122	3.2	101	0.00	12.76
81	tetrachloroethene	-----NA-----					
82	1,3-dichloropropane	0.611	0.600	1.8	104	0.00	12.77
83	butyl acetate	0.257	0.249	3.1	103	0.00	12.83
84	dibromochloromethane	0.456	0.470	-3.1	107	0.00	13.01
85	1,2-dibromoethane	0.408	0.420	-2.9	105	0.00	13.16
86	n-butyl ether	1.877	1.821	3.0	100	0.00	13.60
87	chlorobenzene	1.161	1.153	0.7	105	0.00	13.64
88	1,1,1,2-tetrachloroethane	0.444	0.442	0.5	103	0.00	13.71
89	ethylbenzene	1.946	1.880	3.4	104	0.00	13.70
90	m,p-xylene	0.745	0.739	0.8	104	0.00	13.82
91	o-xylene	1.583	1.511	4.5	103	0.00	14.22
92	styrene	1.200	1.211	-0.9	104	0.00	14.23
93	n-amyl acetate	0.271	0.254	6.3	96	0.00	14.27
94	bromoform	0.278	0.307	-10.4	111	0.00	14.46
95	butyl acrylate	0.792	0.786	0.8	100	0.00	14.06
96	isopropylbenzene	1.890	1.843	2.5	103	0.00	14.57
97	cis-1,4-dichloro-2-butene	0.159	0.166	-4.4	104	0.00	14.61
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	15.93

Initial Calibration Verification**Job Number:** JD3305**Sample:** V2A8671-ICV8671**Account:** UTC United Technologies Corporation**Lab FileID:** 2A200478.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	S	4-bromofluorobenzene (s)	0.943	0.928	1.6	104	0.00	14.76
100		bromobenzene	0.994	0.973	2.1	103	0.00	14.95
101		1,1,2,2-tetrachloroethane	0.858	0.849	1.0	103	0.00	14.85
102		trans-1,4-dichloro-2-bute	0.216	0.207	4.2	100	0.00	14.88
103		1,2,3-trichloropropane	0.223	0.210	5.8	101	0.00	14.93
104		n-propylbenzene	4.325	4.213	2.6	104	0.00	14.98
105		2-chlorotoluene	0.943	0.893	5.3	101	0.00	15.11
106		4-chlorotoluene	2.647	2.597	1.9	105	0.00	15.22
107		1,3,5-trimethylbenzene	3.035	2.965	2.3	102	0.00	15.14
108		tert-butylbenzene	2.566	2.526	1.6	102	0.00	15.48
109		1,2,4-trimethylbenzene	3.034	3.040	-0.2	105	0.00	15.53
110		sec-butylbenzene	3.893	3.821	1.8	103	0.00	15.70
111		1,3-dichlorobenzene	1.797	1.803	-0.3	106	0.00	15.86
112		p-isopropyltoluene	3.232	3.261	-0.9	104	0.00	15.83
113		benzyl chloride	1.609	1.195	25.7	77	0.00	16.05
114		1,4-dichlorobenzene	1.855	1.794	3.3	105	0.00	15.96
115		1,2-dichlorobenzene	1.720	1.716	0.2	105	0.00	16.33
116		n-butylbenzene	1.726	1.722	0.2	103	0.00	16.23
117		1,2-dibromo-3-chloropropa	0.168	0.159	5.4	95	0.00	17.09
118		1,3,5-trichlorobenzene	1.522	1.581	-3.9	105	0.00	17.28
119		1,2,4-trichlorobenzene	1.271	1.298	-2.1	101	0.00	17.92
120		hexachlorobutadiene	0.698	0.683	2.1	99	0.00	18.04
121		naphthalene	2.185	2.274	-4.1	102	0.00	18.21
122		1,2,3-trichlorobenzene	1.091	1.101	-0.9	101	0.00	18.44
123		hexachloroethane	0.583	0.603	-3.4	104	0.00	16.62
<hr/>								
----- True Calc. % Drift -----								
124		2-ethylhexyl acrylate	10.000	9.824	1.8	112	0.00	17.95
<hr/>								
----- AvgRF CCRF % Dev -----								
125		2-methylnaphthalene	1.039	1.045	-0.6	102	0.00	19.45
126		bis(chloromethyl)ether			NA			
127		ethylenimine			NA			
<hr/>								
<hr/>								

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

2A200473.D M2A8671.M

Thu Feb 06 10:52:09 2020 MS2A

6.7.2
6

Initial Calibration Verification

Job Number: JD3305

Sample: V2A8671-ICV8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200479.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\V2A8671\2A200479.D Vial: 15
 Acq On : 4 Feb 2020 10:24 pm Operator: CHELSEAS
 Sample : ICV8671-50 Inst : Instrumen
 Misc : MS40388,V2A8671,w,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 Last Update : Thu Feb 06 10:48:34 2020
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	107	0.00	7.30
2	ethanol		-----NA-----				
3	tertiary butyl alcohol		-----NA-----				
4	1,4-dioxane		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	9.56
6	chlorodifluoromethane		-----NA-----				
7	dichlorodifluoromethane		-----NA-----				
8	chloromethane		-----NA-----				
9	v vinyl chloride		-----NA-----				
10	1,3-butadiene		-----NA-----				
11	bromomethane		-----NA-----				
12	chloroethane		-----NA-----				
13	v vinyl bromide		-----NA-----				
14	trichlorofluoromethane		-----NA-----				
15	ethyl ether		-----NA-----				
16	2-chloropropane		-----NA-----				
17	acrolein		-----NA-----				
18	freon 113		-----NA-----				
19	1,1-dichloroethene		-----NA-----				
20	acetone		-----NA-----				
21	acetonitrile	0.060	0.056	6.7	99	0.00	7.07
22	iodomethane		-----NA-----				
23	carbon disulfide		-----NA-----				
24	methylene chloride		-----NA-----				
25	methyl acetate		-----NA-----				
26	methyl tert butyl ether		-----NA-----				
27	trans-1,2-dichloroethene		-----NA-----				
28	hexane		-----NA-----				
29	di-isopropyl ether		-----NA-----				
30	ethyl tert-butyl ether		-----NA-----				
31	2-butanone		-----NA-----				
32	1,1-dichloroethane		-----NA-----				
33	chloroprene		-----NA-----				
34	acrylonitrile	0.172	0.164	4.7	98	0.00	7.64
35	vinyl acetate		-----NA-----				
36	ethyl acetate		-----NA-----				
37	2,2-dichloropropane		-----NA-----				
38	cis-1,2-dichloroethene		-----NA-----				
39	propionitrile		-----NA-----				
40	bromochloromethane		-----NA-----				
41	tetrahydrofuran		-----NA-----				

Initial Calibration Verification

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2A8671-ICV8671
Lab FileID: 2A200479.D

42	chloroform		-----	-NA-----						
43	tert-butyl formate		-----	-NA-----						
44	isobutyl alcohol		-----	-NA-----						
45 S	dibromofluoromethane (s)	0.454	0.454	0.0	104	0.00	9.59			
46	methacrylonitrile		-----	-NA-----						
47	1,1,1-trichloroethane		-----	-NA-----						
48	cyclohexane		-----	-NA-----						
49	1,1-dichloropropene		-----	-NA-----						
50	tert-amyl alcohol		-----	-NA-----						
51	carbon tetrachloride		-----	-NA-----						
52 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	10.49			
53 S	1,2-dichloroethane-d4 (s)	0.332	0.340	-2.4	108	0.00	10.01			
54	2,2,4-trimethylpentane		-----	-NA-----						
55	tert-amyl methyl ether		-----	-NA-----						
56	n-butyl alcohol		-----	-NA-----						
57	benzene		-----	-NA-----						
58	heptane		-----	-NA-----						
59	isopropyl acetate		-----	-NA-----						
60	1,2-dichloroethane		-----	-NA-----						
61	trichloroethene		-----	-NA-----						
62	ethyl acrylate		-----	-NA-----						
63	2-nitropropane		-----	-NA-----						
64	2-chloroethyl vinyl ether		-----	-NA-----						
65	methyl methacrylate		-----	-NA-----						
66	1,2-dichloropropane		-----	-NA-----						
67	methylcyclohexane		-----	-NA-----						
68	dibromomethane		-----	-NA-----						
69	bromodichloromethane		-----	-NA-----						
70	epichlorohydrin		-----	-NA-----						
71	cis-1,3-dichloropropene		-----	-NA-----						
72	4-methyl-2-pentanone		-----	-NA-----						
73	3-methyl-1-butanol		-----	-NA-----						
74 I	chlorobenzene-d5	1.000	1.000	0.0	105	0.00	13.61			
75 S	toluene-d8 (s)	1.269	1.258	0.9	104	0.00	12.11			
76	toluene		-----	-NA-----						
77	trans-1,3-dichloropropene		-----	-NA-----						
78	ethyl methacrylate		-----	-NA-----						
79	1,1,2-trichloroethane		-----	-NA-----						
80	2-hexanone		-----	-NA-----						
81	tetrachloroethene	0.481	0.490	-1.9	109	0.00	12.73			
82	1,3-dichloropropane		-----	-NA-----						
83	butyl acetate		-----	-NA-----						
84	dibromochloromethane		-----	-NA-----						
85	1,2-dibromoethane		-----	-NA-----						
86	n-butyl ether		-----	-NA-----						
87	chlorobenzene		-----	-NA-----						
88	1,1,1,2-tetrachloroethane		-----	-NA-----						
89	ethylbenzene		-----	-NA-----						
90	m,p-xylene		-----	-NA-----						
91	o-xylene		-----	-NA-----						
92	styrene		-----	-NA-----						
93	n-amyl acetate		-----	-NA-----						
94	bromoform		-----	-NA-----						
95	butyl acrylate		-----	-NA-----						
96	isopropylbenzene		-----	-NA-----						
97	cis-1,4-dichloro-2-butene		-----	-NA-----						
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	15.93			

6.7.3
6

Initial Calibration Verification**Job Number:** JD3305**Sample:** V2A8671-ICV8671**Account:** UTC United Technologies Corporation**Lab FileID:** 2A200479.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	S	4-bromofluorobenzene (s)	0.943	0.952	-1.0	105	0.00	14.76
100		bromobenzene		-----	-NA-	-----		
101		1,1,2,2-tetrachloroethane		-----	-NA-	-----		
102		trans-1,4-dichloro-2-butene		-----	-NA-	-----		
103		1,2,3-trichloropropane		-----	-NA-	-----		
104		n-propylbenzene		-----	-NA-	-----		
105		2-chlorotoluene		-----	-NA-	-----		
106		4-chlorotoluene		-----	-NA-	-----		
107		1,3,5-trimethylbenzene		-----	-NA-	-----		
108		tert-butylbenzene		-----	-NA-	-----		
109		1,2,4-trimethylbenzene		-----	-NA-	-----		
110		sec-butylbenzene		-----	-NA-	-----		
111		1,3-dichlorobenzene		-----	-NA-	-----		
112		p-isopropyltoluene		-----	-NA-	-----		
113		benzyl chloride		-----	-NA-	-----		
114		1,4-dichlorobenzene		-----	-NA-	-----		
115		1,2-dichlorobenzene		-----	-NA-	-----		
116		n-butylbenzene		-----	-NA-	-----		
117		1,2-dibromo-3-chloropropene		-----	-NA-	-----		
118		1,3,5-trichlorobenzene		-----	-NA-	-----		
119		1,2,4-trichlorobenzene		-----	-NA-	-----		
120		hexachlorobutadiene		-----	-NA-	-----		
121		naphthalene		-----	-NA-	-----		
122		1,2,3-trichlorobenzene		-----	-NA-	-----		
123		hexachloroethane		-----	-NA-	-----		
----- True Calc. % Drift -----								
124		2-ethylhexyl acrylate		-----	-NA-	-----		
----- AvgRF CCRF % Dev -----								
125		2-methylnaphthalene		-----	-NA-	-----		
126		bis(chloromethyl)ether		-----	-NA-	-----		
127		ethylenimine		-----	-NA-	-----		

(#= Out of Range

SPCC's out = 0 CCC's out = 0

2A200473.D M2A8671.M

Thu Feb 06 10:52:09 2020 MS2A

6.7.3
6

Continuing Calibration Summary

Job Number: JD3305

Sample: V2A8686-CC8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200803.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...20\v2a8686\2a200803.d Vial: 2
 Acq On : 19 Feb 2020 7:12 am Operator: edwarddd
 Sample : cc8671-20 Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 Last Update : Mon Sep 13 11:48:20 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
<hr/>						
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	127	0.00
2	ethanol	0.150	0.164	-9.3	141	0.01
3	tertiary butyl alcohol	1.441	1.331	7.6	120	0.01
4	1,4-dioxane	0.137	0.145	-5.8	134	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	137	0.00
6	chlorodifluoromethane	0.702	0.813	-15.8	156	0.02
7	dichlorodifluoromethane	0.753	0.769	-2.1	129	0.02
8	chloromethane	0.908	0.873	3.9	128	0.01
9	viny chloride	0.865	0.884	-2.2	132	0.00
10	1,3-butadiene	0.505	0.614	-21.6#	163	0.01
11	bromomethane	0.570	0.545	4.4	131	0.00
12	chloroethane	0.444	0.441	0.7	134	0.01
13	vinyl bromide	0.456	0.479	-5.0	133	0.00
14	trichlorofluoromethane	0.902	0.930	-3.1	138	0.00
15	ethyl ether	0.302	0.300	0.7	135	0.00
16	2-chloropropane	0.240	0.256	-6.7	146	0.00
17	acrolein	0.080	0.084	-5.0	136	0.01
18	freon 113	0.421	0.479	-13.8	154	0.00
19	1,1-dichloroethene	0.488	0.539	-10.5	148	0.01
20	acetone	0.117	0.108	7.7	127	0.01
21	acetonitrile	0.060	0.057	5.0	130	0.00
22	iodomethane	0.758	0.790	-4.2	145	0.00
23	carbon disulfide	1.479	1.531	-3.5	146	0.00
24	methylene chloride	0.588	0.610	-3.7	147	0.00
25	methyl acetate	0.359	0.328	8.6	125	0.00
26	methyl tert butyl ether	1.430	1.453	-1.6	138	0.00
27	trans-1,2-dichloroethene	0.558	0.582	-4.3	146	0.00
28	hexane	0.812	0.968	-19.2	157	0.00
29	di-isopropyl ether	2.003	2.093	-4.5	142	0.00
30	ethyl tert-butyl ether	1.822	1.853	-1.7	139	0.00
31	2-butanone	0.048	0.044	8.3	127	0.00
32	1,1-dichloroethane	1.064	1.093	-2.7	143	0.00
33	chloroprene	0.848	0.889	-4.8	143	0.00
34	acrylonitrile	0.172	0.164	4.7	127	0.00
35	vinyl acetate	0.103	0.098	4.9	128	0.01
36	ethyl acetate	0.071	0.063	11.3	116	0.00
37	2,2-dichloropropane	0.835	0.874	-4.7	144	0.00
38	cis-1,2-dichloroethene	0.636	0.652	-2.5	143	0.00
39	propionitrile	0.054	0.051	5.6	127	0.00
40	bromochloromethane	0.392	0.393	-0.3	137	0.00
41	tetrahydrofuran	0.128	0.115	10.2	121	0.00

Continuing Calibration Summary

Job Number: JD3305

Sample: V2A8686-CC8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200803.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

42	chloroform	1.028	1.056	-2.7	140	0.00	9.40
43	tert-butyl formate	0.457	0.468	-2.4	140	0.00	9.44
44	isobutyl alcohol	0.017	0.014	17.6	108	0.01	9.80
45 S	dibromofluoromethane (s)	0.454	0.465	-2.4	139	0.00	9.60
46	methacrylonitrile	0.191	0.178	6.8	128	0.00	9.24
47	1,1,1-trichloroethane	0.895	0.936	-4.6	142	0.00	9.66
48	cyclohexane	0.815	0.840	-3.1	140	0.00	9.77
49	1,1-dichloropropene	0.787	0.807	-2.5	140	0.00	9.83
50	tert-amyl alcohol	0.021	0.018	14.3	119	0.00	9.96
51	carbon tetrachloride	0.814	0.840	-3.2	143	0.00	9.85
52 I	1,4-difluorobenzene	1.000	1.000	0.0	137	0.00	10.49
53 S	1,2-dichloroethane-d4 (s)	0.332	0.333	-0.3	137	0.00	10.01
54	2,2,4-trimethylpentane	1.419	1.641	-15.6	152	0.00	10.17
55	tert-amyl methyl ether	1.136	1.118	1.6	134	0.00	10.16
56	n-butyl alcohol	0.008	0.007	12.5	126	0.00	10.55
57	benzene	1.513	1.532	-1.3	141	0.00	10.08
58	heptane	0.302	0.349	-15.6	151	0.00	10.33
59	isopropyl acetate	0.069	0.063	8.7	122	0.00	9.99
60	1,2-dichloroethane	0.528	0.508	3.8	136	0.00	10.10
61	trichloroethene	0.393	0.398	-1.3	142	0.00	10.80
62	ethyl acrylate	0.412	0.382	7.3	123	0.00	10.79
63	2-nitropropane	0.075	0.067	10.7	128	0.00	11.56
64	2-chloroethyl vinyl ether	0.173	0.193	-11.6	150	0.00	11.59
65	methyl methacrylate	0.082	0.075	8.5	124	0.00	11.06
66	1,2-dichloropropane	0.409	0.419	-2.4	140	0.00	11.09
67	methylcyclohexane	0.625	0.704	-12.6	150	0.00	11.09
68	dibromomethane	0.229	0.223	2.6	134	0.00	11.20
69	bromodichloromethane	0.530	0.536	-1.1	137	0.00	11.35
70	epichlorohydrin	0.030	0.028	6.7	128	0.00	11.67
71	cis-1,3-dichloropropene	0.636	0.660	-3.8	140	0.00	11.80
72	4-methyl-2-pentanone	0.120	0.108	10.0	124	0.00	11.91
73	3-methyl-1-butanol	0.007	0.007	0.0	125	0.00	11.91
74 I	chlorobenzene-d5	1.000	1.000	0.0	139	0.00	13.61
75 S	toluene-d8 (s)	1.269	1.257	0.9	138	0.00	12.11
76	toluene	1.069	1.058	1.0	142	0.00	12.19
77	trans-1,3-dichloropropene	0.640	0.651	-1.7	139	0.00	12.37
78	ethyl methacrylate	0.485	0.462	4.7	132	0.00	12.36
79	1,1,2-trichloroethane	0.313	0.303	3.2	134	0.00	12.59
80	2-hexanone	0.126	0.113	10.3	125	0.00	12.76
81	tetrachloroethene	0.481	0.472	1.9	139	0.00	12.74
82	1,3-dichloropropane	0.611	0.589	3.6	136	0.00	12.77
83	butyl acetate	0.257	0.229	10.9	125	0.00	12.83
84	dibromochloromethane	0.456	0.446	2.2	138	0.00	13.01
85	1,2-dibromoethane	0.408	0.392	3.9	132	0.00	13.16
86	n-butyl ether	1.877	1.957	-4.3	141	0.00	13.60
87	chlorobenzene	1.161	1.178	-1.5	143	0.00	13.64
88	1,1,1,2-tetrachloroethane	0.444	0.446	-0.5	141	0.00	13.71
89	ethylbenzene	1.946	1.966	-1.0	141	0.00	13.70
90	m,p-xylene	0.745	0.760	-2.0	142	0.00	13.82
91	o-xylene	1.583	1.576	0.4	140	0.00	14.22
92	styrene	1.200	1.264	-5.3	142	0.00	14.23
93	n-amyl acetate	0.271	0.254	6.3	131	0.00	14.27
94	bromoform	0.278	0.271	2.5	135	0.00	14.46
95	butyl acrylate	0.792	0.768	3.0	134	0.00	14.06
96	isopropylbenzene	1.890	1.931	-2.2	142	0.00	14.57
97	cis-1,4-dichloro-2-butene	0.159	0.145	8.8	131	0.00	14.61
98 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	143	0.00	15.93

6.7.4

Continuing Calibration Summary

Job Number: JD3305

Sample: V2A8686-CC8671

Account: UTC United Technologies Corporation

Lab FileID: 2A200803.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	S	4-bromofluorobenzene (s)	0.943	0.932	1.2	142	0.00	14.76
100		bromobenzene	0.994	0.974	2.0	138	0.00	14.95
101		1,1,2,2-tetrachloroethane	0.858	0.788	8.2	132	0.00	14.85
102		trans-1,4-dichloro-2-bute	0.216	0.190	12.0	126	0.00	14.88
103		1,2,3-trichloropropane	0.223	0.195	12.6	127	0.00	14.93
104		n-propylbenzene	4.325	4.260	1.5	140	0.00	14.98
105		2-chlorotoluene	0.943	0.924	2.0	143	0.00	15.11
106		4-chlorotoluene	2.647	2.613	1.3	141	0.00	15.22
107		1,3,5-trimethylbenzene	3.035	3.037	-0.1	140	0.00	15.14
108		tert-butylbenzene	2.566	2.595	-1.1	142	0.00	15.48
109		1,2,4-trimethylbenzene	3.034	3.034	0.0	141	0.00	15.53
110		sec-butylbenzene	3.893	3.881	0.3	141	0.00	15.70
111		1,3-dichlorobenzene	1.797	1.803	-0.3	143	0.00	15.86
112		p-isopropyltoluene	3.232	3.284	-1.6	141	0.00	15.83
113		benzyl chloride	1.609	1.546	3.9	138	0.00	16.05
114		1,4-dichlorobenzene	1.855	1.765	4.9	138	0.00	15.95
115		1,2-dichlorobenzene	1.720	1.685	2.0	138	0.00	16.33
116		n-butylbenzene	1.726	1.774	-2.8	143	0.00	16.23
117		1,2-dibromo-3-chloropropa	0.168	0.142	15.5	119	0.00	17.09
118		1,3,5-trichlorobenzene	1.522	1.513	0.6	137	0.00	17.28
119		1,2,4-trichlorobenzene	1.271	1.242	2.3	136	0.00	17.92
120		hexachlorobutadiene	0.698	0.692	0.9	138	0.00	18.03
121		naphthalene	2.185	2.107	3.6	131	0.00	18.21
122		1,2,3-trichlorobenzene	1.091	1.079	1.1	139	0.00	18.44
123		hexachloroethane	0.583	0.578	0.9	142	0.00	16.62
<hr/>								
----- True Calc. % Drift -----								
124		2-ethylhexyl acrylate	4.000	3.285	17.9	128	0.00	17.95
<hr/>								
----- AvgRF CCRF % Dev -----								
125		2-methylnaphthalene	1.039	0.941	9.4	142	0.00	19.45
126		bis(chloromethyl)ether			NA			
127		ethylenimine			NA			
<hr/>								
<hr/>								

(#= Out of Range
2A200472.D M2A8671.MSPCC's out = 0 CCC's out = 0
Wed Feb 19 20:44:04 20206.7.4
6

Initial Calibration Summary

Page 1 of 5

Job Number: JD3305

Sample: VL9325-ICC9325

Account: UTC United Technologies Corporation

Lab FileID: L317680.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report GCMSP

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Thu Nov 21 11:59:45 2019
Response via : Initial Calibration

Calibration Files

8	=L317678.D	0.5	=L317674.D	4	=L317677.D	50	=L317680.D
100	=L317681.D	1	=L317675.D	200	=L317682.D	20	=L317679.D
2	=L317676.D	0.2	=L317673.D	=	=		

Compound

	8	0.5	4	50	100	1	200	20	2	0.2	Avg	%RSD
	-	-	-	-	-	-	-	-	-	-	-	-

1)	I	tert butyl alcohol-d9	-----	ISTD-----								
2)	1,4-dioxane		0.106	0.104	0.097	0.093	0.098	0.105	0.098	0.100	4.79	
3)	ethanol		0.113	0.114	0.114	0.115	0.105	0.114	0.103	0.120	0.113	0.112
4)	tertiary butyl alcohol		1.189	1.133	1.146	1.141	1.064	1.208	1.091	1.131	1.065	1.130
5)	I	pentafluorobenzene	-----	ISTD-----								
6)	chlorodifluoromethane		0.476	0.407	0.421	0.512	0.506	0.432	0.511	0.492	0.466	0.522
7)	dichlorodifluoromethane		0.626	0.587	0.668	0.679	0.666	0.666	0.529	0.632	8.77	
8)	chloromethane		0.482	0.602	0.464	0.516	0.505	0.493	0.510	0.513	0.461	0.505
9)	vinyl chloride		0.538	0.567	0.536	0.590	0.573	0.548	0.568	0.595	0.539	0.561
10)	bromomethane		0.125	0.133	0.123	0.141	0.141	0.123	0.127	0.131	6.18	
11)	chloroethane		0.258	0.241	0.269	0.267	0.247	0.268	0.229	0.270	0.262	0.257
12)	vinyl bromide		0.303	0.331	0.292	0.322	0.308	0.265	0.305	0.337	0.294	0.306
13)	trichlorofluoromethane		0.608	0.597	0.616	0.601	0.455	0.568	0.641	0.553	0.580	9.89
14)	ethyl ether		0.235	0.222	0.225	0.246	0.232	0.203	0.228	0.244	0.215	0.228
15)	2-chloropropane		0.647	0.722	0.610	0.642	0.605	0.620	0.569	0.647	0.651	0.635
16)	acrolein		0.098	0.106	0.107	0.101	0.099	0.101		0.102	3.64	
17)	freon 113		0.272	0.261	0.295	0.281	0.270	0.298	0.246	0.275	6.65	
18)	1,1-dichloroethene		0.344	0.374	0.326	0.350	0.328	0.360	0.322	0.351	0.346	0.389
19)	acetone		0.053	0.050	0.053	0.050	0.050	0.047	0.050	0.049	0.050	3.86
20)	acetonitrile		0.040	0.041	0.040	0.037	0.035	0.038	0.041	0.039	6.06	
21)	iodomethane	*This compound fails Initial Calibration criteria*	0.011	0.077	0.143		0.177	0.026		0.087	83.33	
22)	iso-butyl alcohol		0.026	0.028	0.028	0.027	0.029	0.024	0.028	0.030	0.028	6.12
23)	carbon disulfide											

6.7.5
6

Initial Calibration Summary

Page 2 of 5

Job Number: JD3305

Sample: VL9325-ICC9325

Account: UTC United Technologies Corporation

Lab FileID: L317680

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Initial Calibration Summary**Job Number:** JD3305**Sample:** VL9325-ICC9325**Account:** UTC United Technologies Corporation**Lab FileID:** L317680.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

54)	tert-amyl methyl ether	0.290 0.297 0.287 0.284 0.276 0.290 0.271 0.293 0.287 0.288 0.286 0.286 2.70
55)	2,2,4-trimethylpentane	0.841 0.722 0.812 0.805 0.723 0.807 0.699 0.826 0.845 0.940 0.802 0.802 8.96
56)	n-butyl alcohol	0.741 0.661 0.727 0.681 0.579 0.638 0.738 0.596 0.670 0.670 9.41
57)	benzene	0.014 0.013 0.013 0.015 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 4.81
58)	heptane	1.027 1.023 1.035 0.993 0.892 1.052 0.870 1.017 1.019 0.992 0.992 6.56
59)	1,2-dichloroethane	0.170 0.141 0.166 0.168 0.135 0.165 0.169 0.138 0.157 0.157 9.86
60)	trichloroethene	0.343 0.360 0.322 0.289 0.353 0.290 0.325 0.378 0.333 0.333 9.61
61)	ethyl acrylate	0.259 0.258 0.254 0.260 0.248 0.281 0.251 0.259 0.270 0.260 0.260 3.87
62)	2-nitropropane	0.462 0.455 0.431 0.460 0.423 0.415 0.410 0.446 0.456 0.508 0.446 0.446 6.43
63)	2-chloroethyl vinyl ether	*This compound fails Initial Calibration criteria*
		0.004 0.006 0.009 0.013 0.020 0.005 0.010 66.33
64)	methyl methacrylate	0.106 0.085 0.096 0.091 0.088 0.097 0.095 0.094 7.40
65)	1,2-dichloropropane	0.271 0.272 0.257 0.256 0.233 0.227 0.227 0.265 0.282 0.254 0.254 8.11
66)	methylcyclohexane	0.411 0.370 0.437 0.409 0.337 0.400 0.436 0.364 0.396 0.396 8.94
67)	dibromomethane	0.162 0.162 0.160 0.159 0.148 0.159 0.146 0.166 0.160 0.158 0.158 4.25
68)	bromodichloromethane	0.340 0.320 0.328 0.342 0.324 0.317 0.327 0.350 0.326 0.320 0.329 0.329 3.27
69)	cis-1,3-dichloropropene	0.454 0.415 0.418 0.449 0.423 0.431 0.419 0.457 0.458 0.469 0.439 0.439 4.59
70)	epichlorohydrin	0.030 0.025 0.038 0.036 0.035 0.033 0.027 0.032 15.35
71)	4-methyl-2-pentanone	0.151 0.149 0.149 0.154 0.137 0.160 0.129 0.148 0.146 0.147 0.147 6.12
72)	3-methyl-1-butanol	0.014 0.013 0.012 0.014 0.012 0.012 0.012 0.013 0.011 0.013 0.013 6.96
73)	I chlorobenzene-d5	-----ISTD-----
74)	toluene-d8 (s)	1.316 1.330 1.332 1.244 1.239 1.333 1.201 1.289 1.341 1.335 1.296 3.88
75)	toluene	0.761 0.810 0.761 0.734 0.677 0.828 0.658 0.758 0.805 0.722 0.751 7.41
76)	trans-1,3-dichloropropene	0.464 0.493 0.438 0.462 0.426 0.486 0.421 0.465 0.443 0.455 0.455 5.53
77)	ethyl methacrylate	0.512 0.436 0.466 0.472 0.429 0.512 0.405 0.480 0.502 0.468 0.468 8.16
78)	1,1,2-trichloroethane	0.261 0.218 0.248 0.242 0.222 0.257 0.215 0.250 0.266 0.242 0.242 7.98
79)	2-hexanone	0.188 0.177 0.184 0.176 0.156 0.176 0.142 0.176 0.176 0.205 0.176 0.176 9.81
80)	tetrachloroethene	0.359 0.409 0.339 0.353 0.328 0.405 0.321 0.353 0.371 0.400 0.364 0.364 8.73
81)	1,3-dichloropropane	0.508 0.511 0.475 0.466 0.423 0.500 0.406 0.480 0.485 0.570 0.482 0.482 9.54
82)	butyl acetate	0.287 0.269 0.283 0.275 0.249 0.289 0.240 0.280 0.282 0.273 0.273 6.33
83)	dibromochloromethane	

6.7.5
6

Initial Calibration Summary**Job Number:** JD3305**Sample:** VL9325-ICC9325**Account:** UTC United Technologies Corporation**Lab FileID:** L317680.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

84)	1,2-dibromoethane	0.321 0.311 0.311 0.321 0.299 0.310 0.297 0.317 0.344 0.367 0.320 0.320 6.64
85)	n-butyl ether	0.385 0.331 0.374 0.363 0.338 0.398 0.332 0.369 0.337 0.359 0.359 6.98
86)	chlorobenzene	1.261 1.125 1.275 1.229 1.103 1.281 1.030 1.271 1.291 1.304 1.217 7.83
87)	1,1,1,2-tetrachloroethane	0.835 0.744 0.808 0.822 0.764 0.862 0.742 0.840 0.828 0.952 0.820 0.820 7.61
88)	ethylbenzene	0.296 0.287 0.283 0.288 0.259 0.281 0.250 0.295 0.286 0.281 0.281 5.62
89)	m,p-xylene	1.444 1.441 1.413 1.319 1.182 1.468 1.094 1.420 1.427 1.357 1.357 9.75
90)	o-xylene	0.554 0.568 0.548 0.522 0.473 0.559 0.448 0.554 0.565 0.651 0.544 0.544 10.20
91)	butyl acrylate	0.564 0.551 0.549 0.519 0.482 0.537 0.457 0.551 0.527 0.526 0.526 6.76
92)	styrene	0.739 0.705 0.713 0.726 0.657 0.701 0.623 0.727 0.710 0.844 0.715 0.715 8.03
93)	bromoform	0.928 0.855 0.897 0.865 0.774 0.849 0.725 0.909 0.897 1.013 0.871 0.871 9.20
94)	isopropylbenzene	1.404 1.390 1.379 1.344 1.225 1.364 1.146 1.392 1.334 1.585 1.356 1.356 8.51
95)	cis-1,4-dichloro-2-butene	0.123 0.113 0.144 0.139 0.115 0.138 0.129 0.112 0.127 0.127 10.05
96)	I 1,4-dichlorobenzene-d -----ISTD-----	
97)	4-bromofluorobenzene (s)	0.948 0.946 0.948 0.978 0.984 0.954 1.013 0.983 0.970 0.970 0.969 0.969 2.18
98)	bromobenzene	0.794 0.656 0.701 0.779 0.733 0.771 0.754 0.822 0.712 0.806 0.753 0.753 6.90
99)	1,1,2,2-tetrachloroethane	0.929 0.787 0.876 0.969 0.890 0.785 0.920 0.951 0.924 0.892 0.892 7.47
100)	trans-1,4-dichloro-2-butene	0.196 0.181 0.248 0.235 0.241 0.225 0.221 0.221 12.10
101)	1,2,3-trichloropropane	0.284 0.258 0.295 0.265 0.251 0.269 0.288 0.281 0.274 0.274 5.60
102)	n-propylbenzene	3.321 3.066 3.193 3.303 3.059 3.287 3.009 3.477 3.304 3.597 3.262 3.262 5.73
103)	2-chlorotoluene	0.708 0.671 0.701 0.723 0.667 0.679 0.696 0.730 0.672 0.694 0.694 3.33
104)	4-chlorotoluene	0.692 0.602 0.676 0.695 0.647 0.668 0.659 0.715 0.607 0.662 0.662 5.80
105)	1,3,5-trimethylbenzene	2.415 2.121 2.309 2.369 2.186 2.338 2.188 2.443 2.278 2.721 2.337 2.337 7.30
106)	tert-butylbenzene	2.093 2.115 1.984 2.107 2.003 2.069 2.017 2.175 2.062 2.444 2.107 2.107 6.24
107)	1,2,4-trimethylbenzene	2.337 2.371 2.322 2.370 2.198 2.290 2.178 2.444 2.333 2.702 2.354 2.354 6.18
108)	sec-butylbenzene	2.867 2.378 2.680 2.966 2.779 2.808 2.771 3.029 2.769 2.933 2.798 2.798 6.49
109)	1,3-dichlorobenzene	1.307 1.138 1.287 1.361 1.293 1.281 1.309 1.415 1.320 1.543 1.325 1.325 7.82
110)	p-isopropyltoluene	2.401 2.364 2.322 2.440 2.260 2.465 2.225 2.540 2.433 2.424 2.388 2.388 4.03
111)	1,4-dichlorobenzene	1.313 1.259 1.208 1.318 1.237 1.342 1.265 1.336 1.274 1.429 1.298 1.298 4.87
112)	1,2-dichlorobenzene	1.237 1.223 1.239 1.295 1.191 1.201 1.206 1.316 1.268 1.273 1.245 1.245 3.36
113)	n-butylbenzene	

6.7.5
6

Initial Calibration Summary**Job Number:** JD3305**Sample:** VL9325-ICC9325**Account:** UTC United Technologies Corporation**Lab FileID:** L317680.D**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

114)	1,2-dibromo-3-chloropropane	1.079 0.867 1.044 1.193 1.179 1.045 1.205 1.180 1.043 1.059 1.089 9.53 0.226 0.223 0.287 0.274 0.301 0.247 0.228 0.255 12.61
115)	1,3,5-trichlorobenzene	0.918 0.950 0.935 1.045 1.010 0.826 1.072 1.003 0.837 0.955 9.01
116)	1,2,4-trichlorobenzene	0.764 0.741 0.923 0.915 0.740 0.975 0.881 0.709 0.831 12.40
117)	hexachlorobutadiene	0.333 0.322 0.379 0.377 0.328 0.394 0.354 0.290 0.347 10.09
118)	naphthalene	2.177 2.175 2.100 2.543 2.443 1.983 2.501 2.388 2.014 2.592 2.292 9.91
119)	1,2,3-trichlorobenzene	0.668 0.655 0.798 0.798 0.690 0.844 0.775 0.598 0.728 11.91
120)	hexachloroethane	0.389 0.361 0.445 0.440 0.350 0.478 0.435 0.372 0.409 11.42
121)	benzyl chloride	1.649 1.616 1.533 1.777 1.663 1.609 1.714 1.700 1.460 1.687 1.641 5.60
122)	2-ethylhexyl acrylate	0.467 0.382 0.589 0.600 0.644 0.499 0.530 18.52
123)	2-methylnaphthalene	0.856 0.809 1.284 1.273 1.375 1.043 1.107 21.63 ----- Linear regression ----- Coefficient = 0.9990 Response Ratio = -0.05398 + 1.38685 *A
124)	bis(chloromethyl)ether	0.000 -1.00
125)	ethylenimine	0.000 -1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

ML9325.M

Fri Nov 22 12:07:55 2019

1

6.7.5

6

Initial Calibration Verification

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317685.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL9325\L317685.D Vial: 16
 Acq On : 20 Nov 2019 9:49 pm Operator: roberts
 Sample : icv9325-50 Inst : GCMSL
 Misc : MS39191,VL9325,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Nov 21 11:59:45 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.	
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	104	0.00	3.05
2	1,4-dioxane	0.100	0.097	3.0	103	0.00	5.27
3	ethanol	0.112	0.117	-4.5	105	0.00	2.48
4 M	tertiary butyl alcohol	1.130	1.164	-3.0	106	0.00	3.11
5 I	pentafluorobenzene	1.000	1.000	0.0	103	0.00	4.27
6	chlorodifluoromethane	0.474	0.511	-7.8	102	0.00	1.65
7	dichlorodifluoromethane	0.632	0.488	22.8	75	0.00	1.63
8	chloromethane	0.505	0.436	13.7	87	0.00	1.80
9	vinyl chloride	0.562	0.483	14.1	84	0.00	1.88
10	bromomethane	0.131	0.161	-22.9	134	0.00	2.12
11	chloroethane	0.257	0.213	17.1	82	0.00	2.21
12	vinyl bromide	0.306	0.309	-1.0	99	0.00	2.34
13	trichlorofluoromethane	0.580	0.549	5.3	91	0.00	2.39
14	ethyl ether	0.228	0.232	-1.8	97	0.00	2.57
15	2-chloropropane	0.635	0.638	-0.5	102	0.00	2.66
16	acrolein	0.102	0.106	-3.9	102	0.00	2.67
17	freon 113	0.275	0.319	-16.0	111	0.00	2.75
18	1,1-dichloroethene	0.349	0.325	6.9	96	0.00	2.75
19	acetone	0.050	0.089	-78.0#	172	0.00	2.76
20	acetonitrile	0.039	0.045	-15.4	115	0.00	2.96
21	iodomethane	0.087	0.084	3.4	113	0.00	2.87
22	iso-butyl alcohol	0.028	0.030	-7.1	110	0.00	4.42
23	carbon disulfide	0.908	1.013	-11.6	116	0.00	2.92
24	methylene chloride	0.350	0.352	-0.6	100	0.00	3.08
25	methyl acetate	0.091	0.093	-2.2	97	0.00	2.97
26	methyl tert butyl ether	1.160	1.088	6.2	95	0.00	3.25
27	trans-1,2-dichloroethene	0.368	0.354	3.8	96	0.00	3.26
28	hexane	0.496	0.469	5.4	89	0.00	3.44
29	di-isopropyl ether	1.235	1.133	8.3	96	0.00	3.55
30	ethyl tert-butyl ether	1.179	1.108	6.0	94	0.00	3.80
31	2-butanone	0.067	0.091	-35.8#	128	0.00	3.92
32 M	1,1-dichloroethane	0.648	0.655	-1.1	102	0.00	3.56
33	chloroprene	0.533	0.568	-6.6	105	0.00	3.61
34	acrylonitrile	0.193	0.215	-11.4	105	0.00	3.23
35	vinyl acetate	0.099	0.080	19.2	78	0.00	3.53
36	ethyl acetate	0.085	0.083	2.4	98	0.00	3.93
37	2,2-dichloropropane	0.541	0.501	7.4	96	0.00	3.95
38	cis-1,2-dichloroethene	0.400	0.386	3.5	99	0.00	3.95
39	propionitrile	0.079	0.081	-2.5	103	0.00	3.97
40	methyl acrylate	0.079	0.082	-3.8	105	0.00	3.97
41	bromochloromethane	0.197	0.194	1.5	101	0.00	4.12

Initial Calibration Verification

Page 2 of 3

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317685.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	tetrahydrofuran	0.077	0.078	-1.3	100	0.00	4.12
43	chloroform	0.642	0.625	2.6	102	0.00	4.17
44 S	dibromofluoromethane (s)	0.391	0.400	-2.3	105	0.00	4.28
45	methacrylonitrile	0.206	0.213	-3.4	102	0.00	4.07
46	1,1,1-trichloroethane	0.544	0.535	1.7	98	0.00	4.31
47	cyclohexane	0.529	0.465	12.1	90	0.00	4.37
48	1,1-dichloropropene	0.485	0.474	2.3	101	0.00	4.41
49	carbon tetrachloride	0.453	0.461	-1.8	101	0.00	4.42
50	isopropyl acetate	0.113	0.110	2.7	95	0.00	4.53
51	tert amyl alcohol	0.024	0.026	-8.3	104	0.00	4.51
52 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	4.84
53 S	1,2-dichloroethane-d4 (s)	0.286	0.303	-5.9	111	0.00	4.53
54	tert-amyl methyl ether	0.802	0.709	11.6	92	0.00	4.62
55	2,2,4-trimethylpentane	0.670	0.716	-6.9	103	0.00	4.62
56	n-butyl alcohol	0.013	0.015	-15.4	105	0.00	4.90
57 M	benzene	0.992	0.969	2.3	102	0.00	4.56
58	heptane	0.157	0.185	-17.8	116	0.00	4.73
59	1,2-dichloroethane	0.333	0.303	9.0	98	0.00	4.59
60	trichloroethene	0.260	0.261	-0.4	104	0.00	5.03
61	ethyl acrylate	0.446	0.444	0.4	101	0.00	5.05
62	2-nitropropane	0.083	0.090	-8.4	105	0.00	5.58
63	2-chloroethyl vinyl ether	0.010	0.012	-20.0	135	0.00	5.61
64	methyl methacrylate	0.094	0.093	1.1	101	0.00	5.23
65	1,2-dichloropropane	0.254	0.243	4.3	99	0.00	5.23
66	methylcyclohexane	0.396	0.396	0.0	94	0.00	5.22
67	dibromomethane	0.158	0.149	5.7	97	0.00	5.30
68	bromodichloromethane	0.329	0.325	1.2	99	0.00	5.42
69	cis-1,3-dichloropropene	0.439	0.438	0.2	101	0.00	5.76
70	epichlorohydrin	0.032	0.039	-21.9	108	0.00	5.67
71	4-methyl-2-pentanone	0.147	0.150	-2.0	102	0.00	5.85
72	3-methyl-1-butanol	0.013	0.014	-7.7	106	0.00	5.87
73 I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	7.23
74 S	toluene-d8 (s)	1.296	1.250	3.5	103	0.00	5.98
75	toluene	0.751	0.724	3.6	101	0.00	6.04
76	trans-1,3-dichloropropene	0.455	0.462	-1.5	102	0.00	6.21
77	ethyl methacrylate	0.468	0.475	-1.5	103	0.00	6.23
78	1,1,2-trichloroethane	0.242	0.239	1.2	101	0.00	6.38
79	2-hexanone	0.176	0.193	-9.7	112	0.00	6.54
80	tetrachloroethene	0.364	0.514	-41.2#	149	0.00	6.47
81	1,3-dichloropropane	0.482	0.456	5.4	100	0.00	6.53
82	butyl acetate	0.273	0.275	-0.7	102	0.00	6.62
83	dibromochloromethane	0.320	0.334	-4.4	106	0.00	6.71
84	1,2-dibromoethane	0.359	0.360	-0.3	101	0.00	6.83
85	n-butyl ether	1.217	1.262	-3.7	105	0.00	7.30
86	chlorobenzene	0.820	0.829	-1.1	103	0.00	7.25
87	1,1,1,2-tetrachloroethane	0.281	0.290	-3.2	103	0.00	7.32
88	ethylbenzene	1.357	1.309	3.5	101	0.00	7.33
89	m,p-xylene	0.544	0.524	3.7	103	0.00	7.45
90	o-xylene	0.526	0.522	0.8	103	0.00	7.80
91	butyl acrylate	0.715	0.721	-0.8	102	0.00	7.72
92	styrene	0.871	0.863	0.9	102	0.00	7.82
93	bromoform	0.227	0.257	-13.2	112	0.00	7.99
94	isopropylbenzene	1.356	1.349	0.5	103	0.00	8.14
95	cis-1,4-dichloro-2-butene	0.127	0.144	-13.4	103	0.00	8.19
96 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	9.42
97 S	4-bromofluorobenzene (s)	0.969	0.979	-1.0	104	0.00	8.31
98	bromobenzene	0.753	0.780	-3.6	104	0.00	8.45

6.7.6
6

Initial Calibration Verification

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317685.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.892	0.954	-7.0	102	0.00	8.42
100	trans-1,4-dichloro-2-bute	0.221	0.242	-9.5	101	0.00	8.45
101	1,2,3-trichloropropane	0.274	0.277	-1.1	97	0.00	8.48
102	n-propylbenzene	3.262	3.312	-1.5	104	0.00	8.53
103	2-chlorotoluene	0.694	0.711	-2.4	102	0.00	8.62
104	4-chlorotoluene	0.662	0.693	-4.7	103	0.00	8.74
105	1,3,5-trimethylbenzene	2.337	2.343	-0.3	102	0.00	8.70
106	tert-butylbenzene	2.107	2.148	-1.9	106	0.00	9.01
107	1,2,4-trimethylbenzene	2.354	2.352	0.1	103	0.00	9.06
108	sec-butylbenzene	2.798	2.880	-2.9	101	0.00	9.22
109	1,3-dichlorobenzene	1.325	1.386	-4.6	105	0.00	9.35
110	p-isopropyltoluene	2.388	2.446	-2.4	104	0.00	9.37
111	1,4-dichlorobenzene	1.298	1.306	-0.6	103	0.00	9.44
112	1,2-dichlorobenzene	1.245	1.275	-2.4	102	0.00	9.80
113	n-butylbenzene	1.089	1.184	-8.7	103	0.00	9.77
114	1,2-dibromo-3-chloropropane	0.255	0.274	-7.5	99	0.00	10.56
115	1,3,5-trichlorobenzene	0.955	1.052	-10.2	104	0.00	10.75
116	1,2,4-trichlorobenzene	0.831	0.889	-7.0	100	0.00	11.38
117	hexachlorobutadiene	0.347	0.367	-5.8	100	0.00	11.52
118	naphthalene	2.292	2.515	-9.7	102	0.00	11.64
119	1,2,3-trichlorobenzene	0.728	0.793	-8.9	103	0.00	11.86
120	hexachloroethane	0.409	0.455	-11.2	106	0.00	10.06
121	benzyl chloride	1.641	2.099	-27.9	122	0.00	9.55
122	2-ethylhexyl acrylate	0.530	0.621	-17.2	109	0.00	11.55

123	2-methylnaphthalene	25.000	25.393	-1.6	105	0.00	12.77

124	bis(chloromethyl)ether	AvgRF	CCRF	% Dev	-----	-----	-----
125	ethylenimine		-----NA-----	-----NA-----			

(#= Out of Range
L317680.D ML9325.MSPCC's out = 0 CCC's out = 0
Fri Nov 22 12:07:43 2019 16.7.6
6

Initial Calibration Verification

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317686.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL9325\L317686.D Vial: 17
 Acq On : 20 Nov 2019 10:16 pm Operator: roberts
 Sample : icv9325-50 Inst : GCMSL
 Misc : MS39191,VL9325,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Nov 21 11:59:45 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	104	0.00	3.05
2	1,4-dioxane		-----NA-----				
3	ethanol		-----NA-----				
4 M	tertiary butyl alcohol		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	115	0.00	4.27
6	chlorodifluoromethane		-----NA-----				
7	dichlorodifluoromethane		-----NA-----				
8	chloromethane		-----NA-----				
9	vinyl chloride		-----NA-----				
10	bromomethane		-----NA-----				
11	chloroethane		-----NA-----				
12	vinyl bromide		-----NA-----				
13	trichlorofluoromethane		-----NA-----				
14	ethyl ether		-----NA-----				
15	2-chloropropane		-----NA-----				
16	acrolein		-----NA-----				
17	freon 113		-----NA-----				
18	1,1-dichloroethene		-----NA-----				
19	acetone		-----NA-----				
20	acetonitrile	0.039	0.036	7.7	104	0.00	2.96
21	iodomethane		-----NA-----				
22	iso-butyl alcohol		-----NA-----				
23	carbon disulfide		-----NA-----				
24	methylene chloride		-----NA-----				
25	methyl acetate		-----NA-----				
26	methyl tert butyl ether		-----NA-----				
27	trans-1,2-dichloroethene		-----NA-----				
28	hexane		-----NA-----				
29	di-isopropyl ether		-----NA-----				
30	ethyl tert-butyl ether		-----NA-----				
31	2-butanone		-----NA-----				
32 M	1,1-dichloroethane		-----NA-----				
33	chloroprene		-----NA-----				
34	acrylonitrile	0.193	0.200	-3.6	110	0.00	3.23
35	vinyl acetate		-----NA-----				
36	ethyl acetate		-----NA-----				
37	2,2-dichloropropane		-----NA-----				
38	cis-1,2-dichloroethene		-----NA-----				
39	propionitrile		-----NA-----				
40	methyl acrylate		-----NA-----				
41	bromochloromethane		-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317686.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	tetrahydrofuran		-----	-NA-----				
43	chloroform		-----	-NA-----				
44 S	dibromofluoromethane (s)	0.391	0.377	3.6	111	0.00	4.28	
45	methacrylonitrile		-----	-NA-----				
46	1,1,1-trichloroethane		-----	-NA-----				
47	cyclohexane		-----	-NA-----				
48	1,1-dichloropropene		-----	-NA-----				
49	carbon tetrachloride		-----	-NA-----				
50	isopropyl acetate		-----	-NA-----				
51	tert amyl alcohol		-----	-NA-----				
52 I	1,4-difluorobenzene	1.000	1.000	0.0	113	0.00	4.84	
53 S	1,2-dichloroethane-d4 (s)	0.286	0.282	1.4	112	0.00	4.53	
54	tert-amyl methyl ether		-----	-NA-----				
55	2,2,4-trimethylpentane		-----	-NA-----				
56	n-butyl alcohol		-----	-NA-----				
57 M	benzene		-----	-NA-----				
58	heptane		-----	-NA-----				
59	1,2-dichloroethane		-----	-NA-----				
60	trichloroethene		-----	-NA-----				
61	ethyl acrylate		-----	-NA-----				
62	2-nitropropane		-----	-NA-----				
63	2-chloroethyl vinyl ether		-----	-NA-----				
64	methyl methacrylate		-----	-NA-----				
65	1,2-dichloropropane		-----	-NA-----				
66	methylcyclohexane		-----	-NA-----				
67	dibromomethane		-----	-NA-----				
68	bromodichloromethane		-----	-NA-----				
69	cis-1,3-dichloropropene		-----	-NA-----				
70	epichlorohydrin		-----	-NA-----				
71	4-methyl-2-pentanone		-----	-NA-----				
72	3-methyl-1-butanol		-----	-NA-----				
73 I	chlorobenzene-d5	1.000	1.000	0.0	103	0.00	7.23	
74 S	toluene-d8 (s)	1.296	1.365	-5.3	114	0.00	5.98	
75	toluene		-----	-NA-----				
76	trans-1,3-dichloropropene		-----	-NA-----				
77	ethyl methacrylate		-----	-NA-----				
78	1,1,2-trichloroethane		-----	-NA-----				
79	2-hexanone		-----	-NA-----				
80	tetrachloroethene	0.364	0.362	0.5	106	0.00	6.47	
81	1,3-dichloropropane		-----	-NA-----				
82	butyl acetate		-----	-NA-----				
83	dibromochloromethane		-----	-NA-----				
84	1,2-dibromoethane		-----	-NA-----				
85	n-butyl ether		-----	-NA-----				
86	chlorobenzene		-----	-NA-----				
87	1,1,1,2-tetrachloroethane		-----	-NA-----				
88	ethylbenzene		-----	-NA-----				
89	m,p-xylene		-----	-NA-----				
90	o-xylene		-----	-NA-----				
91	butyl acrylate		-----	-NA-----				
92	styrene		-----	-NA-----				
93	bromoform		-----	-NA-----				
94	isopropylbenzene		-----	-NA-----				
95	cis-1,4-dichloro-2-butene		-----	-NA-----				
96 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	112	0.00	9.42	
97 S	4-bromofluorobenzene (s)	0.969	0.946	2.4	108	0.00	8.31	
98	bromobenzene		-----	-NA-----				

6.7.7
6

Initial Calibration Verification

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: VL9325-ICV9325
Lab FileID: L317686.D

99	1,1,2,2-tetrachloroethane	-----	-NA-----
100	trans-1,4-dichloro-2-bute	-----	-NA-----
101	1,2,3-trichloropropane	-----	-NA-----
102	n-propylbenzene	-----	-NA-----
103	2-chlorotoluene	-----	-NA-----
104	4-chlorotoluene	-----	-NA-----
105	1,3,5-trimethylbenzene	-----	-NA-----
106	tert-butylbenzene	-----	-NA-----
107	1,2,4-trimethylbenzene	-----	-NA-----
108	sec-butylbenzene	-----	-NA-----
109	1,3-dichlorobenzene	-----	-NA-----
110	p-isopropyltoluene	-----	-NA-----
111	1,4-dichlorobenzene	-----	-NA-----
112	1,2-dichlorobenzene	-----	-NA-----
113	n-butylbenzene	-----	-NA-----
114	1,2-dibromo-3-chloropropane	-----	-NA-----
115	1,3,5-trichlorobenzene	-----	-NA-----
116	1,2,4-trichlorobenzene	-----	-NA-----
117	hexachlorobutadiene	-----	-NA-----
118	naphthalene	-----	-NA-----
119	1,2,3-trichlorobenzene	-----	-NA-----
120	hexachloroethane	-----	-NA-----
121	benzyl chloride	-----	-NA-----
122	2-ethylhexyl acrylate	-----	-NA-----
		----- True	Calc. % Drift -----
123	2-methylnaphthalene	-----	-NA-----
		----- AvgRF	CCRF % Dev -----
124	bis(chloromethyl)ether	-----	-NA-----
125	ethylenimine	-----	-NA-----

(#) = Out of Range
L317680.D ML9325.M

SPCC's out = 0 CCC's out = 0
Fri Nov 22 12:07:45 2019 1

Initial Calibration Verification

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317695.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VL9325\L317695.D Vial: 9
 Acq On : 21 Nov 2019 8:40 pm Operator: brittank
 Sample : icv9325-50 Inst : GCMSL
 Misc : MS39191,VL9325,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Nov 21 11:59:45 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	109	0.00	3.05
2	1,4-dioxane		-----NA-----				
3	ethanol		-----NA-----				
4 M	tertiary butyl alcohol		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	118	0.00	4.27
6	chlorodifluoromethane		-----NA-----				
7	dichlorodifluoromethane		-----NA-----				
8	chloromethane		-----NA-----				
9	vinyl chloride		-----NA-----				
10	bromomethane		-----NA-----				
11	chloroethane		-----NA-----				
12	vinyl bromide		-----NA-----				
13	trichlorofluoromethane		-----NA-----				
14	ethyl ether		-----NA-----				
15	2-chloropropane		-----NA-----				
16	acrolein		-----NA-----				
17	freon 113		-----NA-----				
18	1,1-dichloroethene		-----NA-----				
19	acetone	0.050	0.047	6.0	104	0.00	2.76
20	acetonitrile		-----NA-----				
21	iodomethane		-----NA-----				
22	iso-butyl alcohol		-----NA-----				
23	carbon disulfide		-----NA-----				
24	methylene chloride		-----NA-----				
25	methyl acetate		-----NA-----				
26	methyl tert butyl ether		-----NA-----				
27	trans-1,2-dichloroethene		-----NA-----				
28	hexane		-----NA-----				
29	di-isopropyl ether		-----NA-----				
30	ethyl tert-butyl ether		-----NA-----				
31	2-butanone	0.067	0.067	0.0	109	0.00	3.91
32 M	1,1-dichloroethane		-----NA-----				
33	chloroprene		-----NA-----				
34	acrylonitrile		-----NA-----				
35	vinyl acetate		-----NA-----				
36	ethyl acetate		-----NA-----				
37	2,2-dichloropropane		-----NA-----				
38	cis-1,2-dichloroethene		-----NA-----				
39	propionitrile		-----NA-----				
40	methyl acrylate		-----NA-----				
41	bromochloromethane		-----NA-----				

Initial Calibration Verification

Job Number: JD3305

Sample: VL9325-ICV9325

Account: UTC United Technologies Corporation

Lab FileID: L317695.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	tetrahydrofuran		-----	-NA-----					
43	chloroform		-----	-NA-----					
44 S	dibromofluoromethane (s)	0.391	0.405	-3.6	122	0.00	4.28		
45	methacrylonitrile		-----	-NA-----					
46	1,1,1-trichloroethane		-----	-NA-----					
47	cyclohexane		-----	-NA-----					
48	1,1-dichloropropene		-----	-NA-----					
49	carbon tetrachloride		-----	-NA-----					
50	isopropyl acetate		-----	-NA-----					
51	tert amyl alcohol		-----	-NA-----					
52 I	1,4-difluorobenzene	1.000	1.000	0.0	120	0.00	4.83		
53 S	1,2-dichloroethane-d4 (s)	0.286	0.295	-3.1	125	0.00	4.53		
54	tert-amyl methyl ether		-----	-NA-----					
55	2,2,4-trimethylpentane		-----	-NA-----					
56	n-butyl alcohol		-----	-NA-----					
57 M	benzene		-----	-NA-----					
58	heptane		-----	-NA-----					
59	1,2-dichloroethane		-----	-NA-----					
60	trichloroethene		-----	-NA-----					
61	ethyl acrylate		-----	-NA-----					
62	2-nitropropane		-----	-NA-----					
63	2-chloroethyl vinyl ether		-----	-NA-----					
64	methyl methacrylate		-----	-NA-----					
65	1,2-dichloropropane		-----	-NA-----					
66	methylcyclohexane		-----	-NA-----					
67	dibromomethane		-----	-NA-----					
68	bromodichloromethane		-----	-NA-----					
69	cis-1,3-dichloropropene		-----	-NA-----					
70	epichlorohydrin		-----	-NA-----					
71	4-methyl-2-pentanone		-----	-NA-----					
72	3-methyl-1-butanol		-----	-NA-----					
73 I	chlorobenzene-d5	1.000	1.000	0.0	114	0.00	7.22		
74 S	toluene-d8 (s)	1.296	1.309	-1.0	120	0.00	5.98		
75	toluene		-----	-NA-----					
76	trans-1,3-dichloropropene		-----	-NA-----					
77	ethyl methacrylate		-----	-NA-----					
78	1,1,2-trichloroethane		-----	-NA-----					
79	2-hexanone		-----	-NA-----					
80	tetrachloroethene		-----	-NA-----					
81	1,3-dichloropropane		-----	-NA-----					
82	butyl acetate		-----	-NA-----					
83	dibromochloromethane		-----	-NA-----					
84	1,2-dibromoethane		-----	-NA-----					
85	n-butyl ether		-----	-NA-----					
86	chlorobenzene		-----	-NA-----					
87	1,1,1,2-tetrachloroethane		-----	-NA-----					
88	ethylbenzene		-----	-NA-----					
89	m,p-xylene		-----	-NA-----					
90	o-xylene		-----	-NA-----					
91	butyl acrylate		-----	-NA-----					
92	styrene		-----	-NA-----					
93	bromoform		-----	-NA-----					
94	isopropylbenzene		-----	-NA-----					
95	cis-1,4-dichloro-2-butene		-----	-NA-----					
96 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	124	0.00	9.42		
97 S	4-bromofluorobenzene (s)	0.969	0.946	2.4	120	0.00	8.30		
98	bromobenzene		-----	-NA-----					

6.7.8

Initial Calibration Verification

Job Number: JD3305
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: VL9325-ICV9325
Lab FileID: L317695.D

99	1,1,2,2-tetrachloroethane	-----	-NA-----
100	trans-1,4-dichloro-2-bute	-----	-NA-----
101	1,2,3-trichloropropane	-----	-NA-----
102	n-propylbenzene	-----	-NA-----
103	2-chlorotoluene	-----	-NA-----
104	4-chlorotoluene	-----	-NA-----
105	1,3,5-trimethylbenzene	-----	-NA-----
106	tert-butylbenzene	-----	-NA-----
107	1,2,4-trimethylbenzene	-----	-NA-----
108	sec-butylbenzene	-----	-NA-----
109	1,3-dichlorobenzene	-----	-NA-----
110	p-isopropyltoluene	-----	-NA-----
111	1,4-dichlorobenzene	-----	-NA-----
112	1,2-dichlorobenzene	-----	-NA-----
113	n-butylbenzene	-----	-NA-----
114	1,2-dibromo-3-chloropropane	-----	-NA-----
115	1,3,5-trichlorobenzene	-----	-NA-----
116	1,2,4-trichlorobenzene	-----	-NA-----
117	hexachlorobutadiene	-----	-NA-----
118	naphthalene	-----	-NA-----
119	1,2,3-trichlorobenzene	-----	-NA-----
120	hexachloroethane	-----	-NA-----
121	benzyl chloride	-----	-NA-----
122	2-ethylhexyl acrylate	-----	-NA-----
123	2-methylnaphthalene	----- True -----	Calc. % Drift ----- ----- -NA-----
124	bis(chloromethyl)ether	----- AvgRF -----	CCRF % Dev ----- ----- -NA-----
125	ethylenimine	-----	----- -NA-----

(#) = Out of Range
L317680.D ML9325.M

SPCC's out = 0 CCC's out = 0
Fri Nov 22 12:07:47 2019 1

Continuing Calibration Summary

Job Number: JD3305

Sample: VL9424-CC9325

Account: UTC United Technologies Corporation

Lab FileID: L319837.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kr...2020\vl9424\1319837.d Vial: 2
 Acq On : 18 Feb 2020 6:51 am Operator: edwardd
 Sample : cc9325-20 Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 Last Update : Thu Nov 21 11:59:45 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	87	0.00	3.05
2	1,4-dioxane	0.100	0.117	-17.0	97	0.00	5.26
3	ethanol	0.112	0.133	-18.8	97	0.00	2.48
4 M	tertiary butyl alcohol	1.130	1.276	-12.9	98	0.00	3.10
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	4.26
6	chlorodifluoromethane	0.474	0.598	-26.2#	126	0.00	1.65
7	dichlorodifluoromethane	0.632	0.588	7.0	92	0.00	1.63
8	chloromethane	0.505	0.536	-6.1	109	0.00	1.79
9	vinyl chloride	0.562	0.633	-12.6	111	0.00	1.88
10	bromomethane	0.131	0.132	-0.8	111	0.00	2.13
11	chloroethane	0.257	0.309	-20.2#	119	0.00	2.21
12	vinyl bromide	0.306	0.331	-8.2	102	0.00	2.34
13	trichlorofluoromethane	0.580	0.618	-6.6	100	0.00	2.39
14	ethyl ether	0.228	0.275	-20.6#	117	0.00	2.57
15	2-chloropropane	0.635	0.717	-12.9	115	0.00	2.66
16	acrolein	0.102	0.108	-5.9	111	0.00	2.67
17	freon 113	0.275	0.363	-32.0#	127	0.00	2.74
18	1,1-dichloroethene	0.349	0.409	-17.2	121	0.00	2.75
19	acetone	0.050	0.049	2.0	101	0.00	2.76
20	acetonitrile	0.039	0.038	2.6	104	0.00	2.95
21	iodomethane	0.087	0.036	58.6#	146	-0.02	2.86
22	iso-butyl alcohol	0.028	0.025	10.7	95	0.00	4.41
23	carbon disulfide	0.908	1.038	-14.3	121	0.00	2.92
24	methylene chloride	0.350	0.409	-16.9	116	0.00	3.08
25	methyl acetate	0.091	0.097	-6.6	110	0.00	2.97
26	methyl tert butyl ether	1.160	1.203	-3.7	106	0.00	3.24
27	trans-1,2-dichloroethene	0.368	0.419	-13.9	118	0.00	3.26
28	hexane	0.496	0.637	-28.4#	123	0.00	3.44
29	di-isopropyl ether	1.235	1.317	-6.6	110	0.00	3.55
30	ethyl tert-butyl ether	1.179	1.258	-6.7	108	0.00	3.79
31	2-butanone	0.067	0.066	1.5	102	0.00	3.91
32 M	1,1-dichloroethane	0.648	0.710	-9.6	109	0.00	3.55
33	chloroprene	0.533	0.594	-11.4	109	0.00	3.61
34	acrylonitrile	0.193	0.200	-3.6	106	0.00	3.22
35	vinyl acetate	0.099	0.113	-14.1	116	0.00	3.53
36	ethyl acetate	0.085	0.090	-5.9	108	0.00	3.92
37	2,2-dichloropropane	0.541	0.558	-3.1	107	0.00	3.95
38	cis-1,2-dichloroethene	0.400	0.451	-12.7	114	0.00	3.94
39	propionitrile	0.079	0.066	16.5	87	0.00	3.96
40	methyl acrylate	0.079	0.076	3.8	100	0.00	3.97
41	bromochloromethane	0.197	0.215	-9.1	110	0.00	4.11

6.7.9
6

Continuing Calibration Summary

Page 2 of 3

Job Number: JD3305

Sample: VL9424-CC9325

Account: UTC United Technologies Corporation

Lab FileID: L319837.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	tetrahydrofuran	0.077	0.075	2.6	99	0.00	4.12
43	chloroform	0.642	0.648	-0.9	106	0.00	4.16
44 S	dibromofluoromethane (s)	0.391	0.356	9.0	96	0.00	4.27
45	methacrylonitrile	0.206	0.205	0.5	105	0.00	4.07
46	1,1,1-trichloroethane	0.544	0.545	-0.2	103	0.00	4.30
47	cyclohexane	0.529	0.536	-1.3	99	0.00	4.36
48	1,1-dichloropropene	0.485	0.504	-3.9	110	0.00	4.41
49	carbon tetrachloride	0.453	0.456	-0.7	102	0.00	4.41
50	isopropyl acetate	0.113	0.114	-0.9	103	0.00	4.53
51	tert amyl alcohol	0.024	0.021	12.5	91	0.00	4.50
52 I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	4.83
53 S	1,2-dichloroethane-d4 (s)	0.286	0.260	9.1	88	0.00	4.52
54	tert-amyl methyl ether	0.802	0.877	-9.4	105	0.00	4.61
55	2,2,4-trimethylpentane	0.670	0.819	-22.2#	109	0.00	4.62
56	n-butyl alcohol	0.013	0.013	0.0	93	0.00	4.89
57 M	benzene	0.992	1.151	-16.0	112	0.00	4.56
58	heptane	0.157	0.199	-26.8#	116	0.00	4.73
59	1,2-dichloroethane	0.333	0.330	0.9	100	0.00	4.58
60	trichloroethene	0.260	0.287	-10.4	109	0.00	5.02
61	ethyl acrylate	0.446	0.468	-4.9	103	0.00	5.04
62	2-nitropropane	0.083	0.076	8.4	93	0.00	5.58
63	2-chloroethyl vinyl ether	0.010	0.021	-110.0#	422#	0.00	5.60
64	methyl methacrylate	0.094	0.101	-7.4	103	0.00	5.22
65	1,2-dichloropropane	0.254	0.289	-13.8	108	0.00	5.22
66	methylcyclohexane	0.396	0.476	-20.2#	108	0.00	5.21
67	dibromomethane	0.158	0.173	-9.5	102	0.00	5.29
68	bromodichloromethane	0.329	0.360	-9.4	102	0.00	5.41
69	cis-1,3-dichloropropene	0.439	0.473	-7.7	102	0.00	5.75
70	epichlorohydrin	0.032	0.024	25.0#	71	0.00	5.66
71	4-methyl-2-pentanone	0.147	0.156	-6.1	104	0.00	5.85
72	3-methyl-1-butanol	0.013	0.012	7.7	92	0.00	5.87
73 I	chlorobenzene-d5	1.000	1.000	0.0	97	0.00	7.22
74 S	toluene-d8 (s)	1.296	1.275	1.6	96	0.00	5.97
75	toluene	0.751	0.857	-14.1	109	0.00	6.03
76	trans-1,3-dichloropropene	0.455	0.481	-5.7	100	0.00	6.20
77	ethyl methacrylate	0.468	0.511	-9.2	103	0.00	6.22
78	1,1,2-trichloroethane	0.242	0.285	-17.8	110	0.00	6.37
79	2-hexanone	0.176	0.178	-1.1	98	0.00	6.54
80	tetrachloroethene	0.364	0.435	-19.5	119	0.00	6.46
81	1,3-dichloropropane	0.482	0.527	-9.3	106	0.00	6.52
82	butyl acetate	0.273	0.289	-5.9	100	0.00	6.62
83	dibromochloromethane	0.320	0.352	-10.0	107	0.00	6.71
84	1,2-dibromoethane	0.359	0.384	-7.0	101	0.00	6.82
85	n-butyl ether	1.217	1.432	-17.7	109	0.00	7.29
86	chlorobenzene	0.820	0.903	-10.1	104	0.00	7.25
87	1,1,1,2-tetrachloroethane	0.281	0.313	-11.4	103	0.00	7.32
88	ethylbenzene	1.357	1.510	-11.3	103	0.00	7.32
89	m,p-xylene	0.544	0.588	-8.1	103	0.00	7.44
90	o-xylene	0.526	0.594	-12.9	104	0.00	7.79
91	butyl acrylate	0.715	0.731	-2.2	97	0.00	7.71
92	styrene	0.871	0.977	-12.2	104	0.00	7.81
93	bromoform	0.227	0.249	-9.7	104	0.00	7.99
94	isopropylbenzene	1.356	1.472	-8.6	102	0.00	8.13
95	cis-1,4-dichloro-2-butene	0.127	0.116	8.7	87	0.00	8.18
96 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	96	0.00	9.42
97 S	4-bromofluorobenzene (s)	0.969	0.943	2.7	92	0.00	8.30
98	bromobenzene	0.753	0.905	-20.2#	106	0.00	8.45

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SGS

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JD3305

Continuing Calibration Summary

Job Number: JD3305

Sample: VL9424-CC9325

Account: UTC United Technologies Corporation

Lab FileID: L319837.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

99	1,1,2,2-tetrachloroethane	0.892	1.008	-13.0	102	0.00	8.42
100	trans-1,4-dichloro-2-bute	0.221	0.201	9.0	86	0.00	8.45
101	1,2,3-trichloropropane	0.274	0.293	-6.9	97	0.00	8.48
102	n-propylbenzene	3.262	3.623	-11.1	100	0.00	8.52
103	2-chlorotoluene	0.694	0.788	-13.5	104	0.00	8.62
104	4-chlorotoluene	0.662	0.761	-15.0	102	0.00	8.73
105	1,3,5-trimethylbenzene	2.337	2.480	-6.1	97	0.00	8.69
106	tert-butylbenzene	2.107	2.210	-4.9	98	0.00	9.00
107	1,2,4-trimethylbenzene	2.354	2.539	-7.9	100	0.00	9.06
108	sec-butylbenzene	2.798	3.095	-10.6	98	0.00	9.22
109	1,3-dichlorobenzene	1.325	1.485	-12.1	101	0.00	9.34
110	p-isopropyltoluene	2.388	2.563	-7.3	97	0.00	9.36
111	1,4-dichlorobenzene	1.298	1.467	-13.0	105	0.00	9.44
112	1,2-dichlorobenzene	1.245	1.389	-11.6	101	0.00	9.80
113	n-butylbenzene	1.089	1.205	-10.7	98	0.00	9.76
114	1,2-dibromo-3-chloropropane	0.255	0.225	11.8	88	0.00	10.56
115	1,3,5-trichlorobenzene	0.955	1.045	-9.4	100	0.00	10.75
116	1,2,4-trichlorobenzene	0.831	0.873	-5.1	95	0.00	11.38
117	hexachlorobutadiene	0.347	0.387	-11.5	105	0.00	11.51
118	naphthalene	2.292	2.159	5.8	87	0.00	11.64
119	1,2,3-trichlorobenzene	0.728	0.742	-1.9	92	0.00	11.86
120	hexachloroethane	0.409	0.403	1.5	89	0.00	10.06
121	benzyl chloride	1.641	1.675	-2.1	95	0.00	9.55
122	2-ethylhexyl acrylate	0.530	0.137	74.2#	26#	0.00	11.55
123	2-methylnaphthalene	10.000	5.073	49.3#	40	0.00	12.78
124	bis(chloromethyl)ether		AvgRF	CCRF	% Dev		
125	ethylenimine			-----NA-----			
				-----NA-----			

(#= Out of Range
L317679.D ML9325.M)SPCC's out = 0 CCC's out = 0
Tue Feb 18 20:44:06 20206.7.9
6

Run Sequence Report

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID:	Method:	Instrument ID:		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID

V2A8671-BFB	2A200465.D	02/04/20 15:37	n/a	BFB Tune
V2A8671-IC8671	2A200466.D	02/04/20 16:12	n/a	Initial cal 0.2
V2A8671-IC8671	2A200467.D	02/04/20 16:41	n/a	Initial cal 0.5
V2A8671-IC8671	2A200468.D	02/04/20 17:09	n/a	Initial cal 1
V2A8671-IC8671	2A200469.D	02/04/20 17:38	n/a	Initial cal 2
V2A8671-IC8671	2A200470.D	02/04/20 18:06	n/a	Initial cal 4
V2A8671-IC8671	2A200471.D	02/04/20 18:35	n/a	Initial cal 8
V2A8671-IC8671	2A200472.D	02/04/20 19:04	n/a	Initial cal 20
V2A8671-ICC8671	2A200473.D	02/04/20 19:32	n/a	Initial cal 50
V2A8671-IC8671	2A200474.D	02/04/20 20:01	n/a	Initial cal 100
V2A8671-IC8671	2A200475.D	02/04/20 20:30	n/a	Initial cal 200
V2A8671-ICV8671	2A200478.D	02/04/20 21:55	n/a	Initial cal verification 50
V2A8671-ICV8671	2A200479.D	02/04/20 22:24	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: V2A8686	Method: SW846 8260C	Instrument ID: GCMS2A		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2A8686-BFB	2A200803.D	02/19/20 07:12	n/a	BFB Tune
V2A8686-CC8671	2A200803.D	02/19/20 07:12	n/a	Continuing cal 20
V2A8686-BS	2A200804.D	02/19/20 07:47	n/a	Blank Spike
V2A8686-MB	2A200806.D	02/19/20 08:45	n/a	Method Blank
ZZZZZZ	2A200807.D	02/19/20 10:07	n/a	(unrelated sample)
ZZZZZZ	2A200808.D	02/19/20 10:36	n/a	(unrelated sample)
ZZZZZZ	2A200809.D	02/19/20 11:05	n/a	(unrelated sample)
ZZZZZZ	2A200811.D	02/19/20 12:03	n/a	(unrelated sample)
JD3162-1	2A200812.D	02/19/20 12:32	n/a	(used for QC only; not part of job JD3305)
ZZZZZZ	2A200813.D	02/19/20 13:01	n/a	(unrelated sample)
JD3162-1MS	2A200814.D	02/19/20 13:30	n/a	Matrix Spike
JD3162-1MSD	2A200815.D	02/19/20 13:59	n/a	Matrix Spike Duplicate
JD3305-2	2A200817.D	02/19/20 15:10	n/a	HSSER-RAMW07-021320
ZZZZZZ	2A200818.D	02/19/20 15:40	n/a	(unrelated sample)

Run Sequence Report

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: VL9325	Method: SW846 8260C	Instrument ID: GCMSL		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VL9325-BFB	L317672.D	11/20/19 15:51	n/a	BFB Tune
VL9325-IC9325	L317673.D	11/20/19 16:24	n/a	Initial cal 0.2
VL9325-IC9325	L317674.D	11/20/19 16:51	n/a	Initial cal 0.5
VL9325-IC9325	L317675.D	11/20/19 17:18	n/a	Initial cal 1
ZZZZZZ	L317675.D	11/20/19 17:18	n/a	(unrelated sample)
VL9325-IC9325	L317676.D	11/20/19 17:45	n/a	Initial cal 2
VL9325-IC9325	L317677.D	11/20/19 18:12	n/a	Initial cal 4
VL9325-IC9325	L317678.D	11/20/19 18:39	n/a	Initial cal 8
VL9325-IC9325	L317679.D	11/20/19 19:06	n/a	Initial cal 20
VL9325-ICC9325	L317680.D	11/20/19 19:33	n/a	Initial cal 50
VL9325-IC9325	L317681.D	11/20/19 20:00	n/a	Initial cal 100
VL9325-IC9325	L317682.D	11/20/19 20:28	n/a	Initial cal 200
VL9325-ICV9325	L317685.D	11/20/19 21:49	n/a	Initial cal verification 50
VL9325-ICV9325	L317686.D	11/20/19 22:16	n/a	Initial cal verification 50
VL9325-BFB2	L317694.D	11/21/19 19:11	n/a	BFB Tune
VL9325-ICV9325	L317695.D	11/21/19 20:40	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD3305

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Run ID: VL9424	Method: SW846 8260C	Instrument ID: GCMSL		
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
VL9424-BFB	L319837.D	02/18/20 06:51	n/a	BFB Tune
VL9424-CC9325	L319837.D	02/18/20 06:51	n/a	Continuing cal 20
VL9424-BS	L319838.D	02/18/20 07:27	n/a	Blank Spike
VL9424-MB	L319840.D	02/18/20 08:21	n/a	Method Blank
JD3305-10	L319841.D	02/18/20 08:53	n/a	HSSEN-RAMW02-021420
ZZZZZZ	L319842.D	02/18/20 09:20	n/a	(unrelated sample)
ZZZZZZ	L319843.D	02/18/20 09:47	n/a	(unrelated sample)
ZZZZZZ	L319844.D	02/18/20 10:14	n/a	(unrelated sample)
JD3305-10MS	L319845.D	02/18/20 10:41	n/a	Matrix Spike
JD3305-10MSD	L319846.D	02/18/20 11:08	n/a	Matrix Spike Duplicate
JD3305-12	L319848.D	02/18/20 12:02	n/a	HSSEN-TBLK02-021220
JD3305-1	L319849.D	02/18/20 12:29	n/a	HSSEN-RAMW08-021320
JD3305-3	L319850.D	02/18/20 12:56	n/a	HSSEN-RAMW06-021320
JD3305-4	L319851.D	02/18/20 13:23	n/a	HSSEN-RAMW05-021320
JD3305-5	L319852.D	02/18/20 13:50	n/a	HSSEN-RAMW04-021320
JD3305-6	L319853.D	02/18/20 14:17	n/a	HSSEN-EBLK02-021320
JD3305-7	L319854.D	02/18/20 14:44	n/a	HSSEN-RAMW03-021420
JD3305-8	L319855.D	02/18/20 15:11	n/a	HSSEN-RAMW01-021420
JD3305-9	L319856.D	02/18/20 15:38	n/a	HSSEN-FBLK02-021420
JD3305-11	L319857.D	02/18/20 16:05	n/a	HSSEN-DUP02-021420
ZZZZZZ	L319858.D	02/18/20 16:32	n/a	(unrelated sample)
JD3305-2	L319859.D	02/18/20 16:59	n/a	HSSEN-RAMW07-021320
ZZZZZZ	L319860.D	02/18/20 17:26	n/a	(unrelated sample)
ZZZZZZ	L319861.D	02/18/20 17:53	n/a	(unrelated sample)
ZZZZZZ	L319862.D	02/18/20 18:20	n/a	(unrelated sample)

MS Volatiles**Raw Data**

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319849.d
 Acq On : 18 Feb 2020 12:29 pm
 Operator : edwardd
 Sample : JD3305-1 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:23:53 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

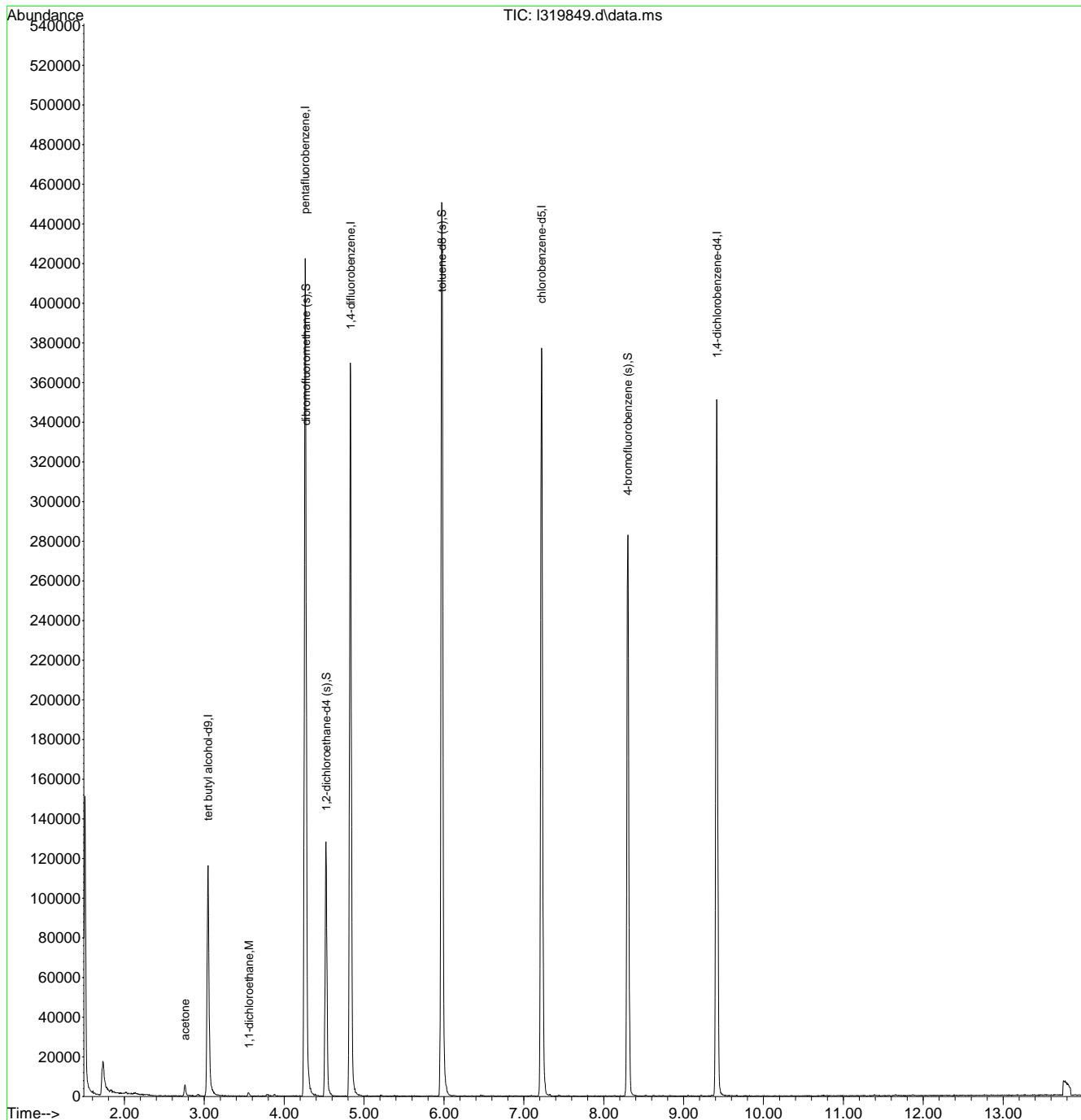
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	122585	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	206092	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	276636	50.00	ug/L	0.00
73) chlorobenzene-d5	7.222	117	228069	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	104984	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	76489	47.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	95.02%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	71211	44.95	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	89.90%		
74) toluene-d8 (s)	5.973	98	296707	50.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.40%		
97) 4-bromofluorobenzene (s)	8.300	95	96615	47.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	94.94%		
<hr/>						
Target Compounds						
19) acetone	2.758	58	1675	8.09	ug/L	89
32) 1,1-dichloroethane	3.557	63	1583	0.59	ug/L	86

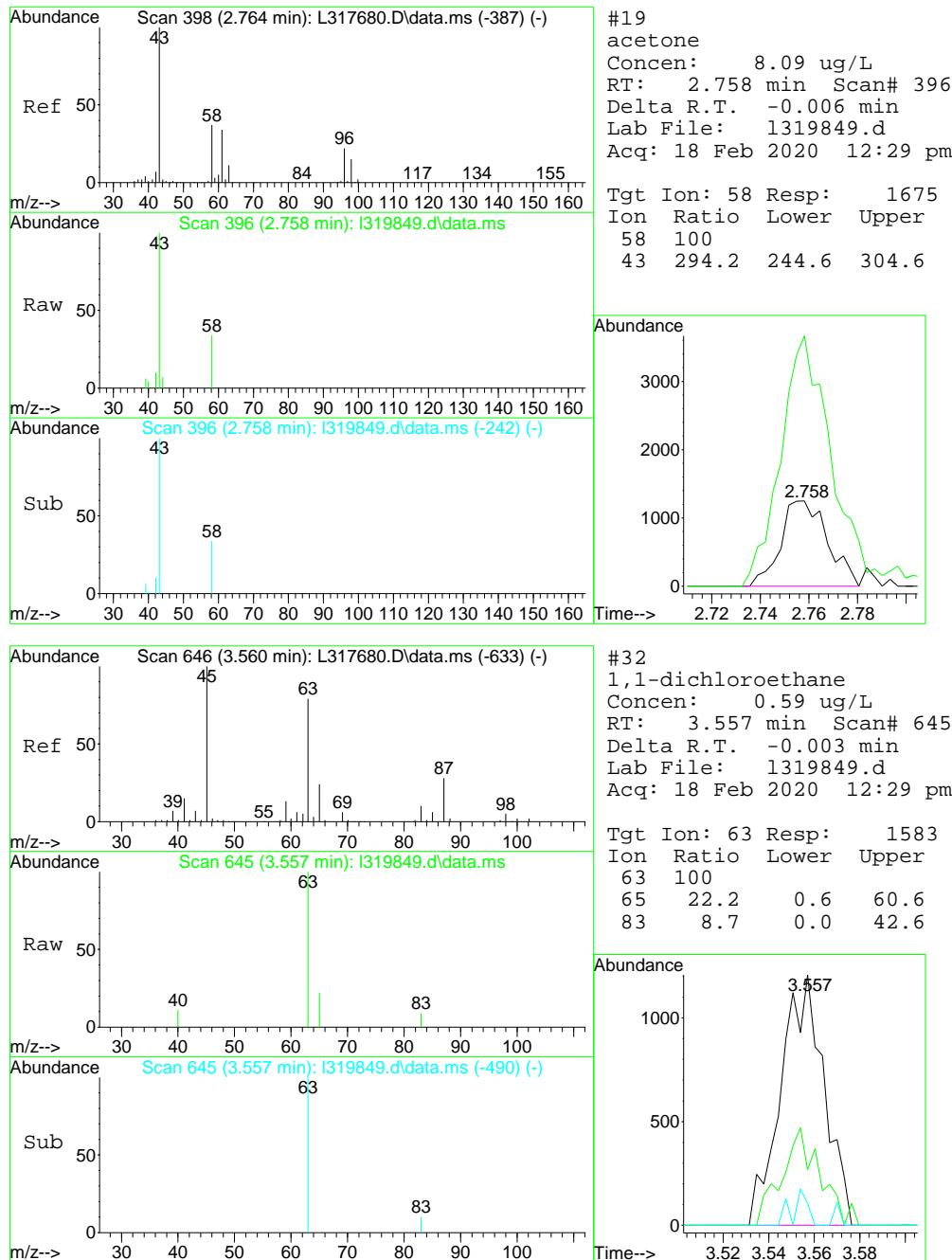
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319849.d
 Acq On : 18 Feb 2020 12:29 pm
 Operator : edwardd
 Sample : JD3305-1
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 14 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:23:53 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200817.d
 Acq On : 19 Feb 2020 3:10 pm
 Operator : edwardd
 Sample : JD3305-2 Inst : Instrument #1
 Misc : MS41192,V2A8686,w,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 21:15:08 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

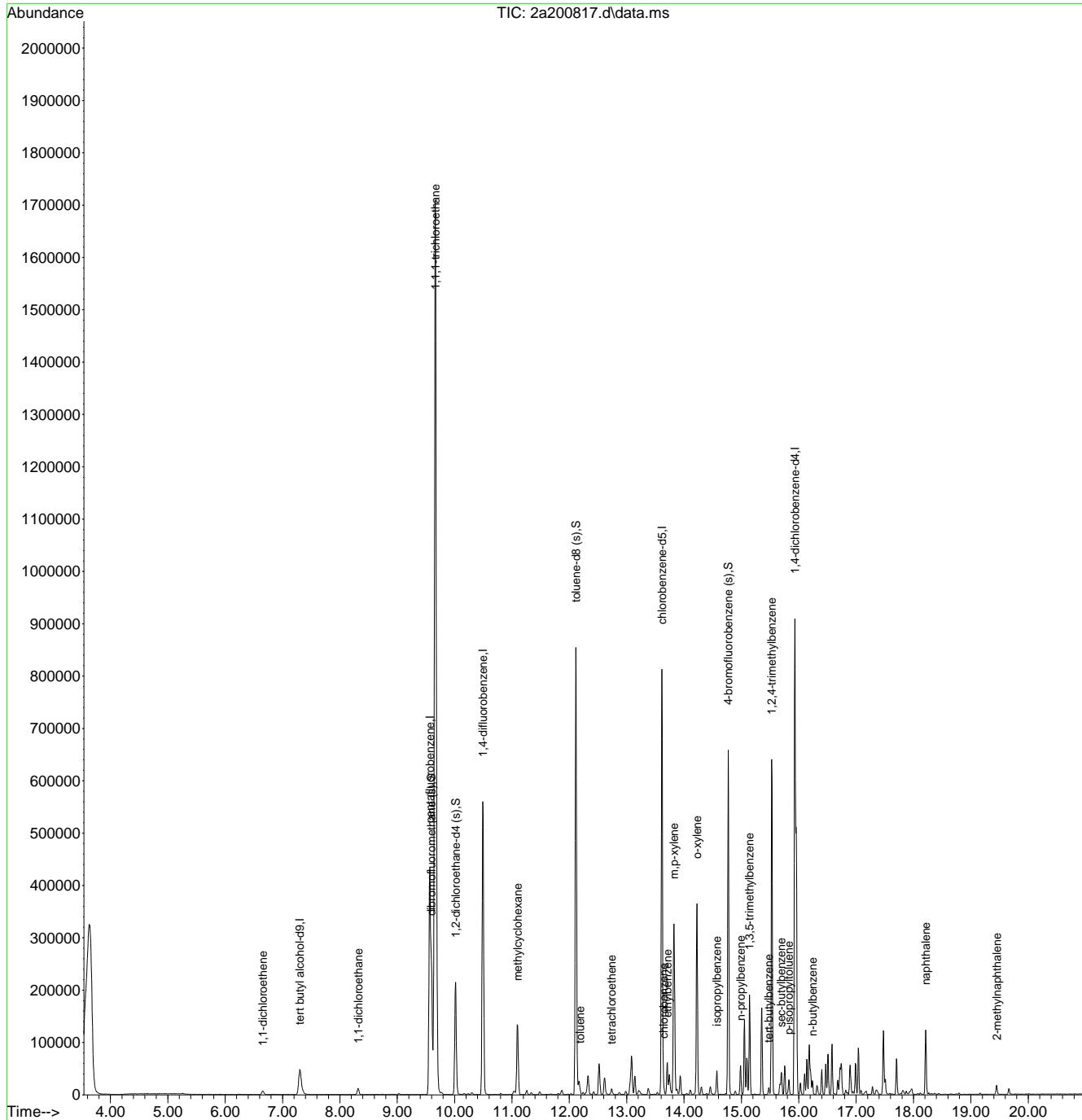
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.301	65	100138	500.00	ug/L	0.00
5) pentafluorobenzene	9.566	168	305179	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.491	114	461880	50.00	ug/L	0.00
74) chlorobenzene-d5	13.614	117	402998	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	205264	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.597	113	143129	51.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	103.20%		
53) 1,2-dichloroethane-d4 (s)	10.015	65	152905	49.89	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	99.78%		
75) toluene-d8 (s)	12.113	98	509610	49.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.64%		
99) 4-bromofluorobenzene (s)	14.770	95	195259	50.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.90%		
Target Compounds						
19) 1,1-dichloroethene	6.658	96	4401	1.48	ug/L	87
32) 1,1-dichloroethane	8.321	63	14860	2.29	ug/L	96
47) 1,1,1-trichloroethane	9.665	97	1302644	238.55	ug/L	95
67) methylcyclohexane	11.098	83	54814	9.50	ug/L	98
76) toluene	12.186	92	2834	0.33	ug/L	94
81) tetrachloroethene	12.735	166	3100	0.80	ug/L	77
87) chlorobenzene	13.645	112	5561	0.59	ug/L	90
89) ethylbenzene	13.708	91	40435	2.58	ug/L	98
90) m,p-xylene	13.823	106	107028	17.82	ug/L	99
91) o-xylene	14.226	91	184955	14.50	ug/L	100
96) isopropylbenzene	14.571	105	26842	1.76	ug/L	100
104) n-propylbenzene	14.984	91	35927	2.02	ug/L	92
107) 1,3,5-trimethylbenzene	15.141	105	90469	7.26	ug/L	100
108) tert-butylbenzene	15.476	119	5203	0.49	ug/L	94
109) 1,2,4-trimethylbenzene	15.528	105	313510	25.17	ug/L	99
110) sec-butylbenzene	15.695	105	27358	1.71	ug/L	98
112) p-isopropyltoluene	15.826	119	15789	1.19	ug/L	99
116) n-butylbenzene	16.239	92	7360	1.04	ug/L	94
121) naphthalene	18.211	128	88286	9.84	ug/L	99
125) 2-methylnaphthalene	19.451	142	9521	2.23	ug/L	93

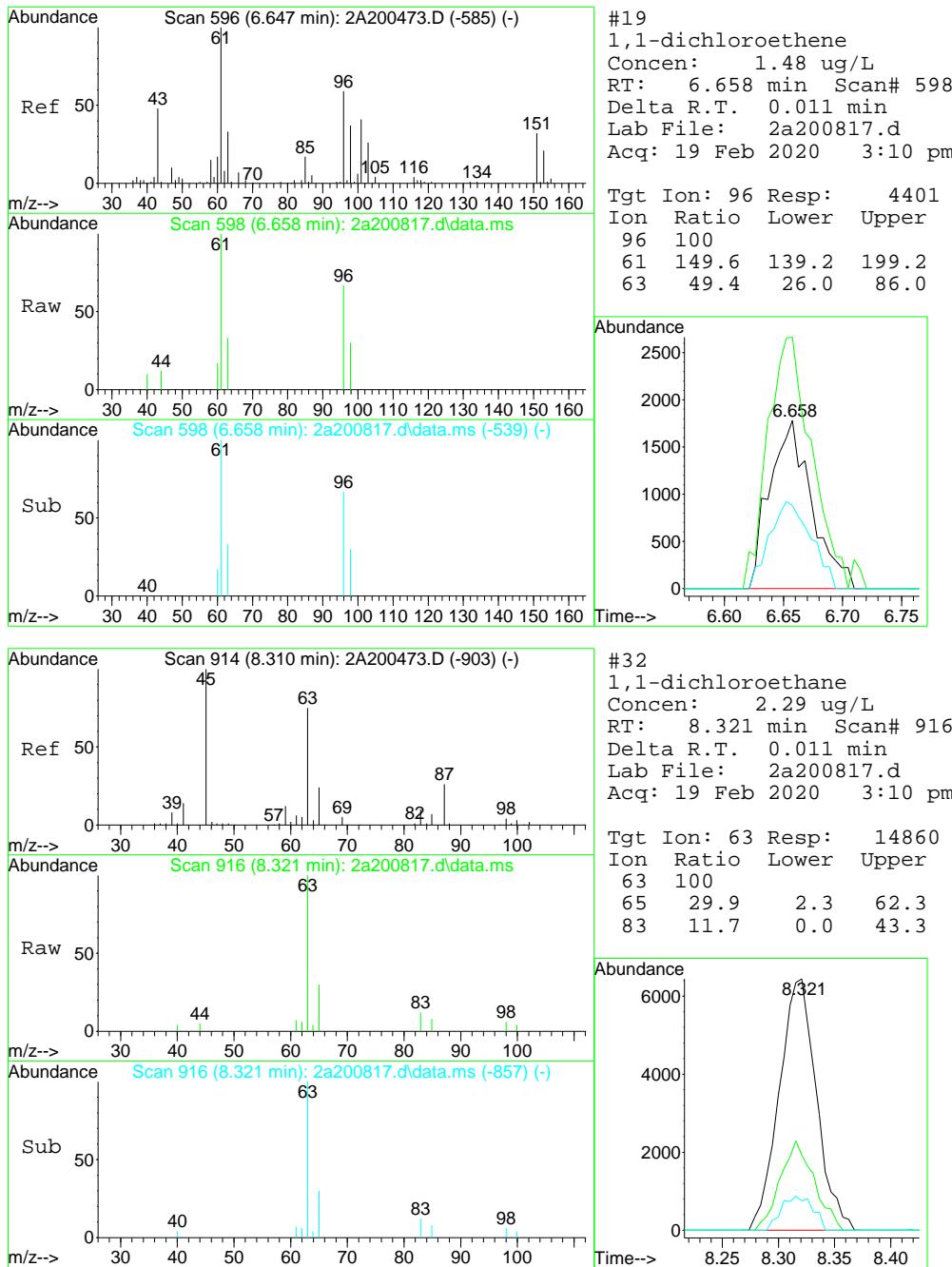
(#) = qualifier out of range (m) = manual integration (+) = signals summed

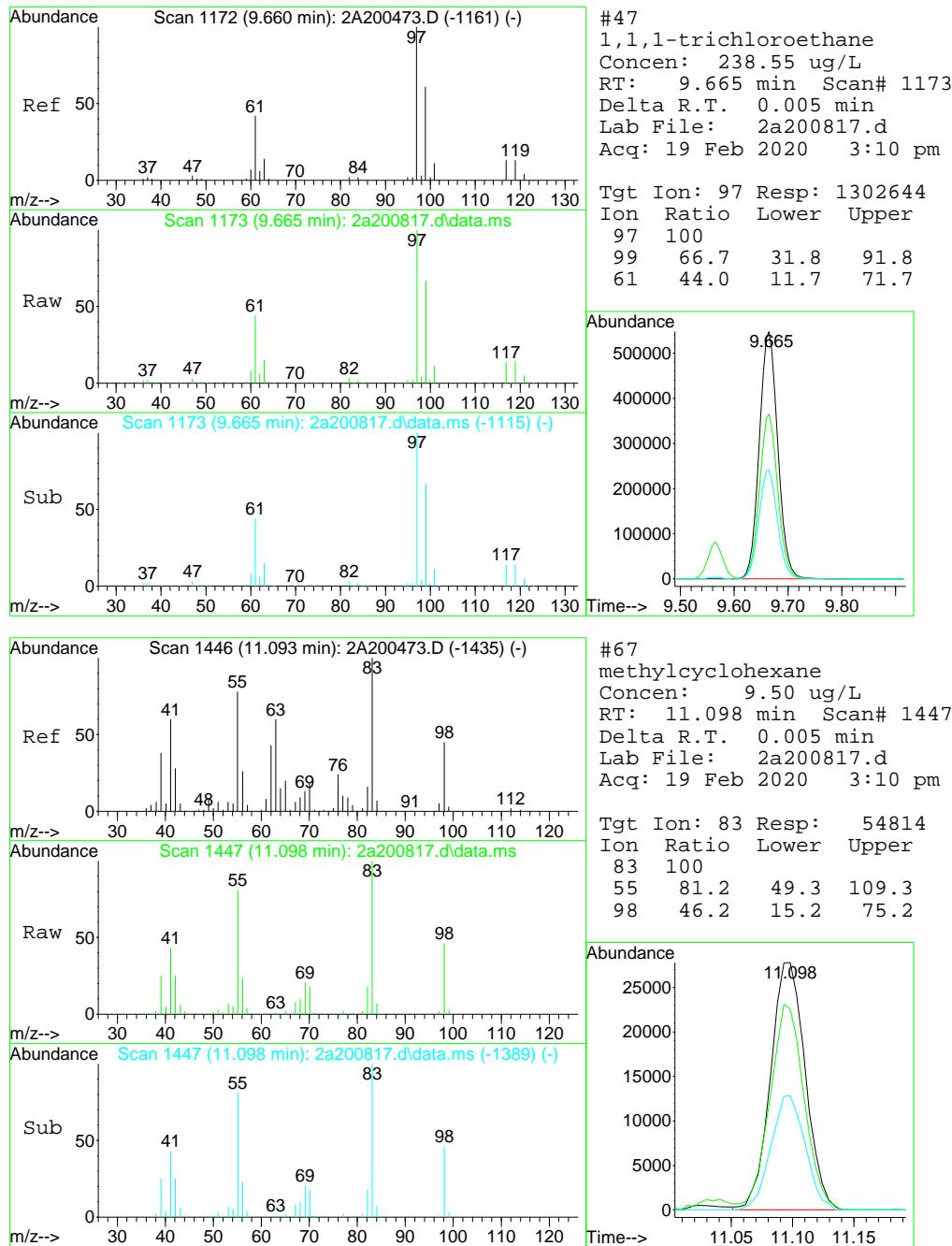
Quantitation Report (QT Reviewed)

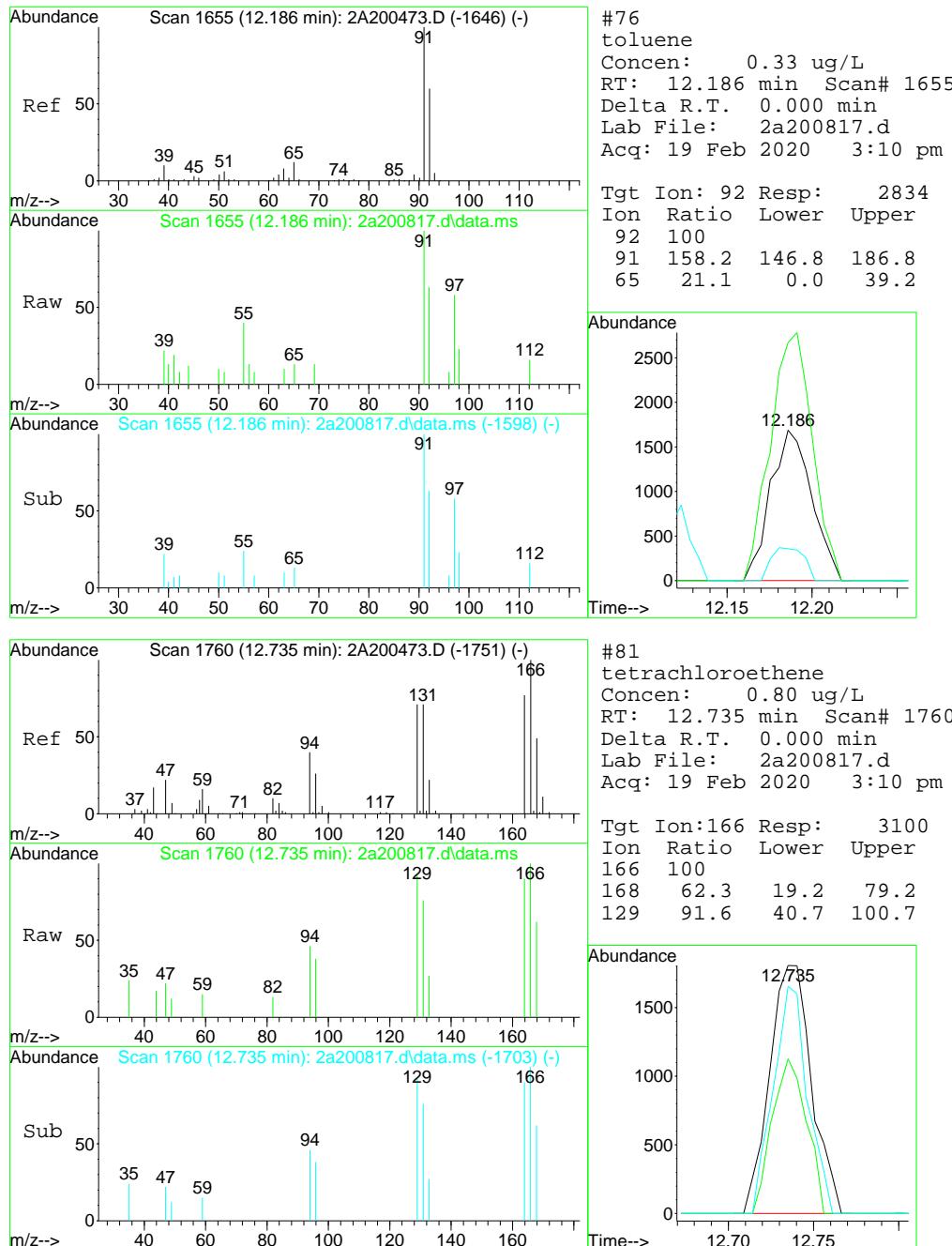
Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200817.d
 Acq On : 19 Feb 2020 3:10 pm
 Operator : edwardd
 Sample : JD3305-2
 Misc : MS41192,V2A8686,w,,,1
 ALS Vial : 16 Sample Multiplier: 1
 Inst : Instrument #1

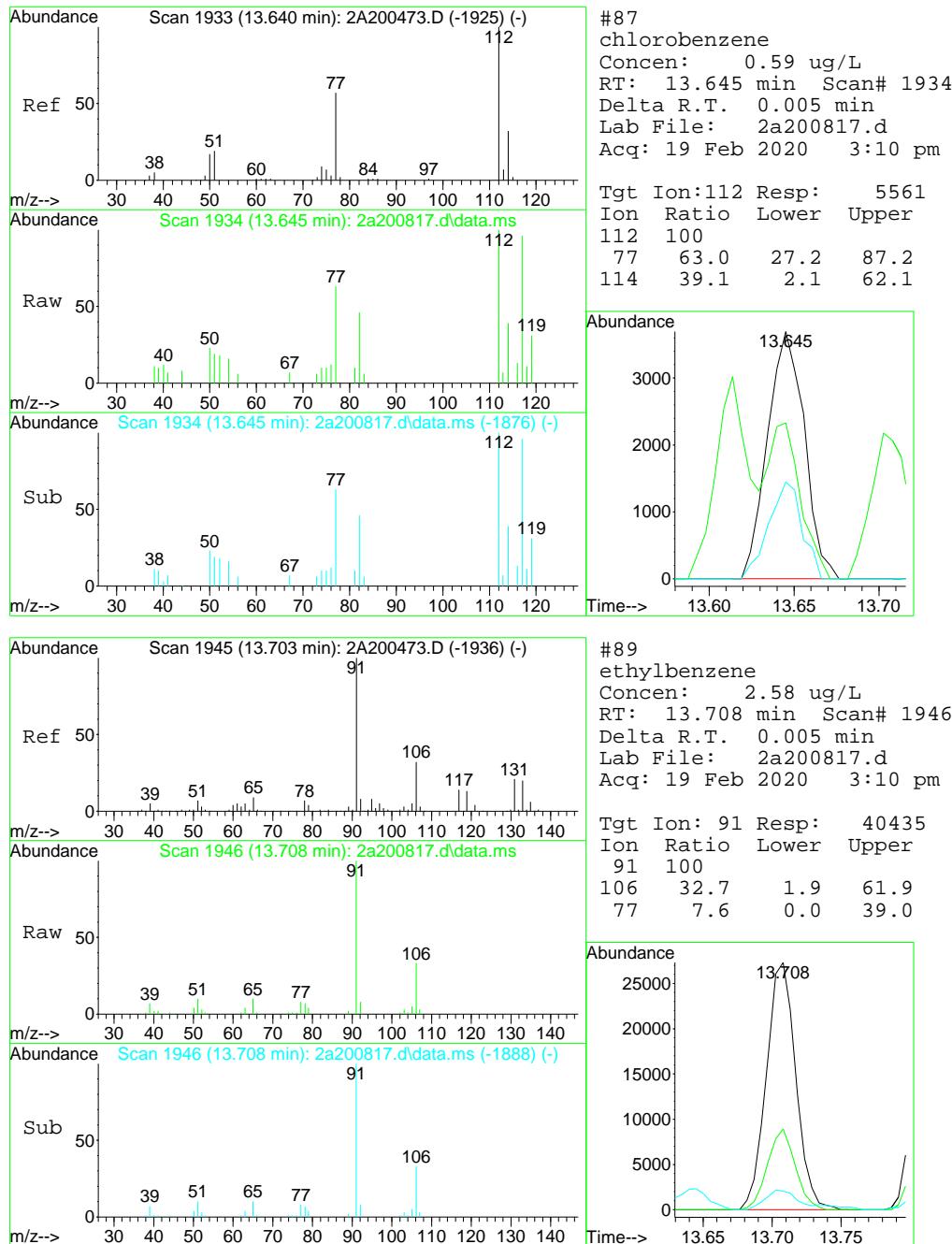
Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 21:15:08 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

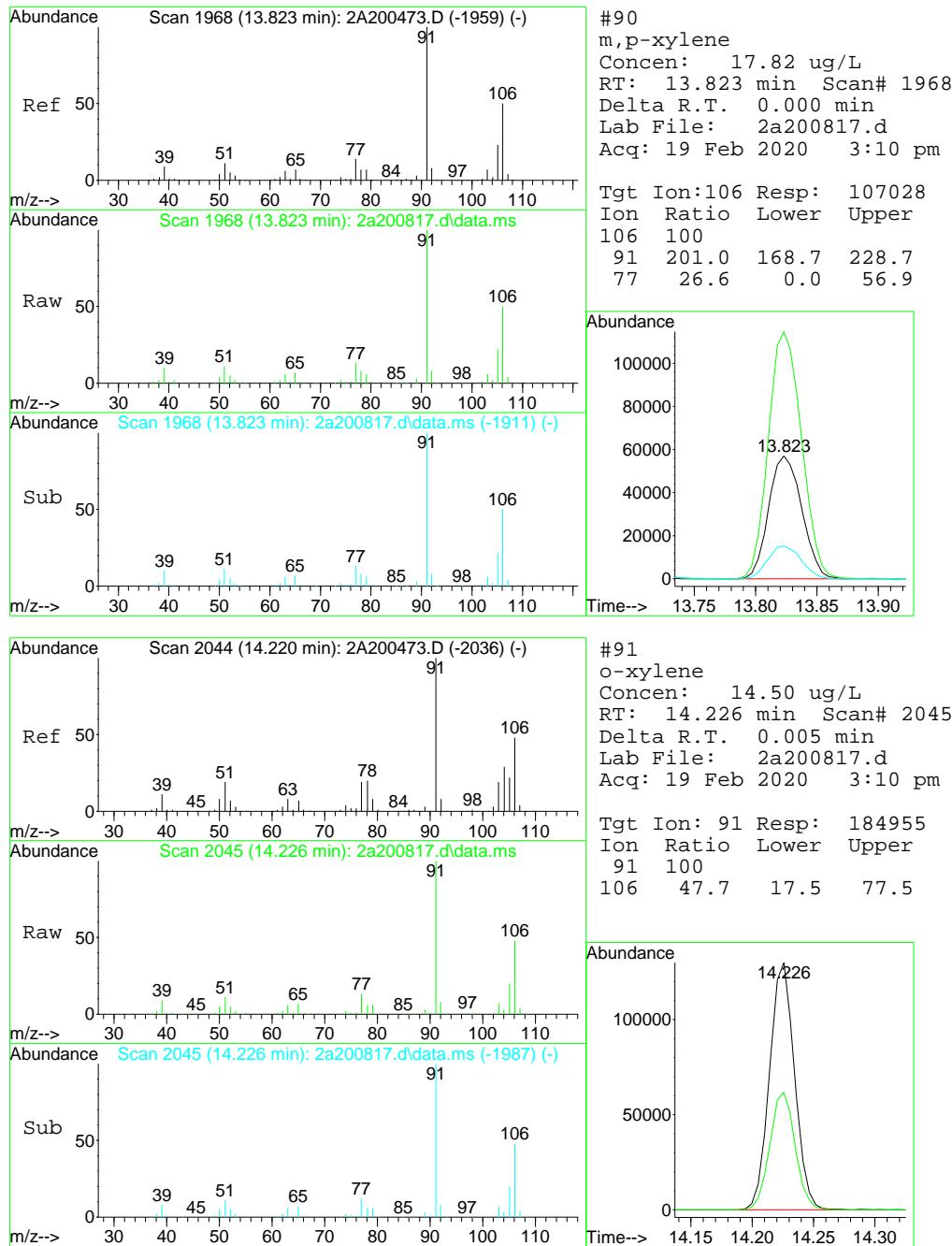


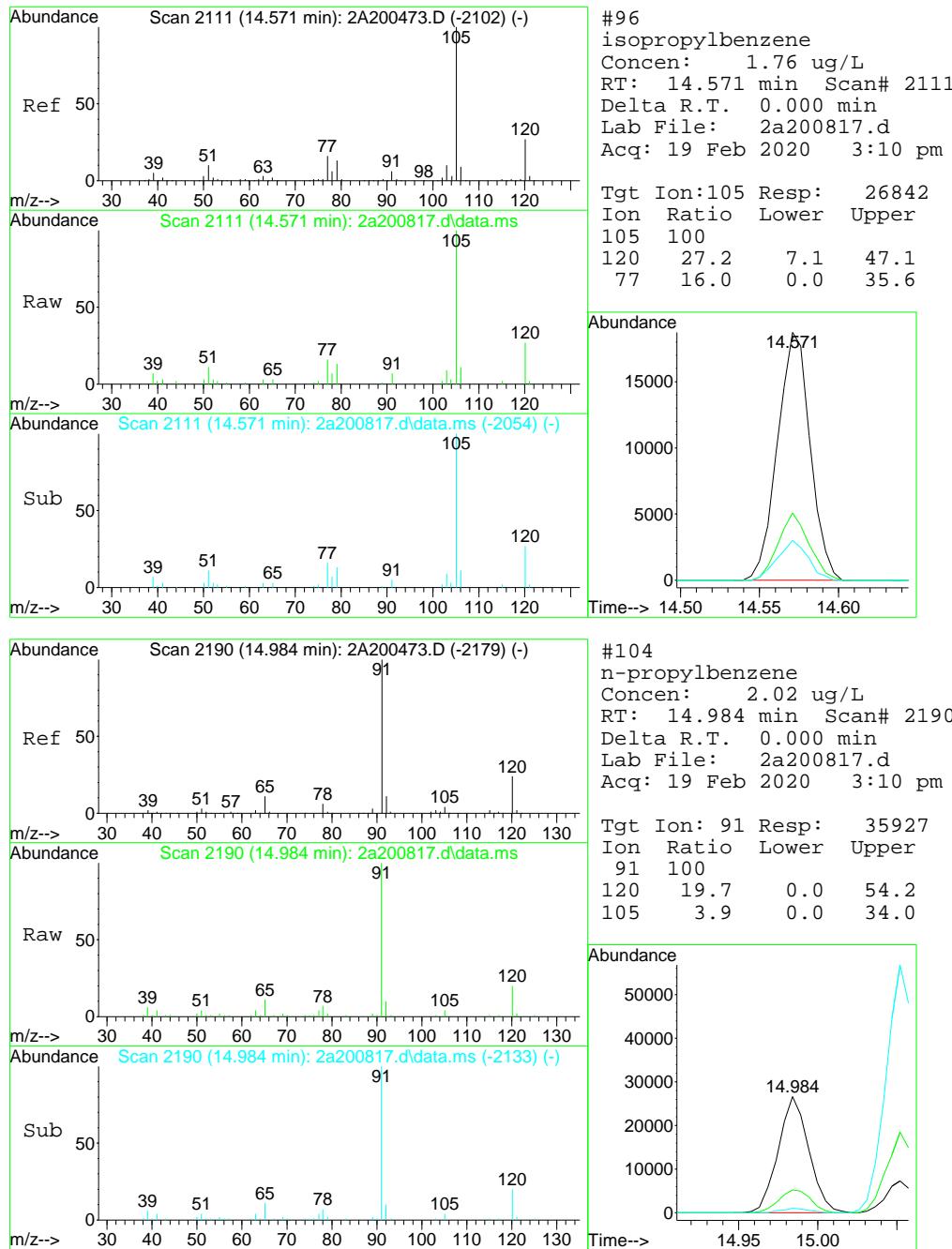


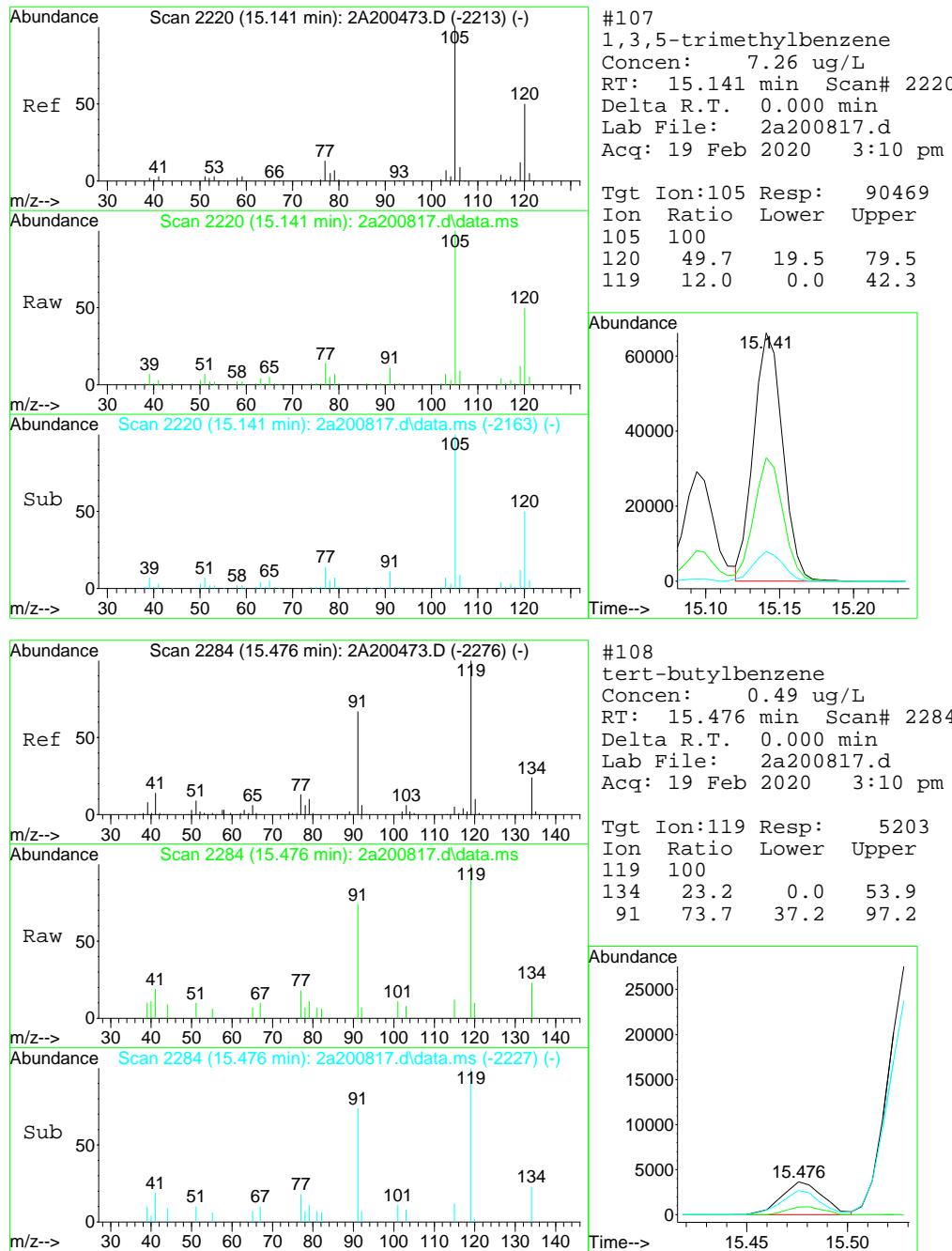


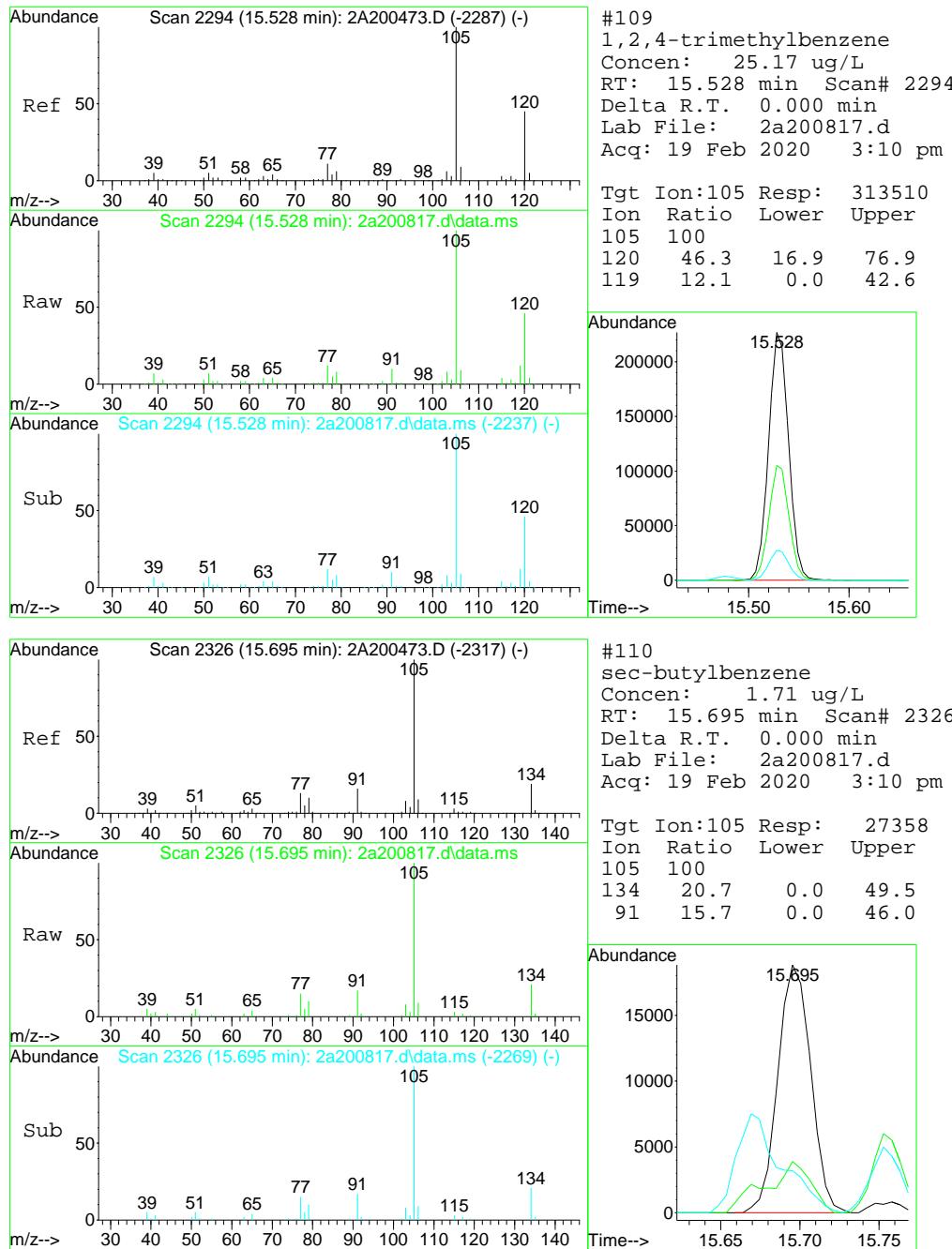


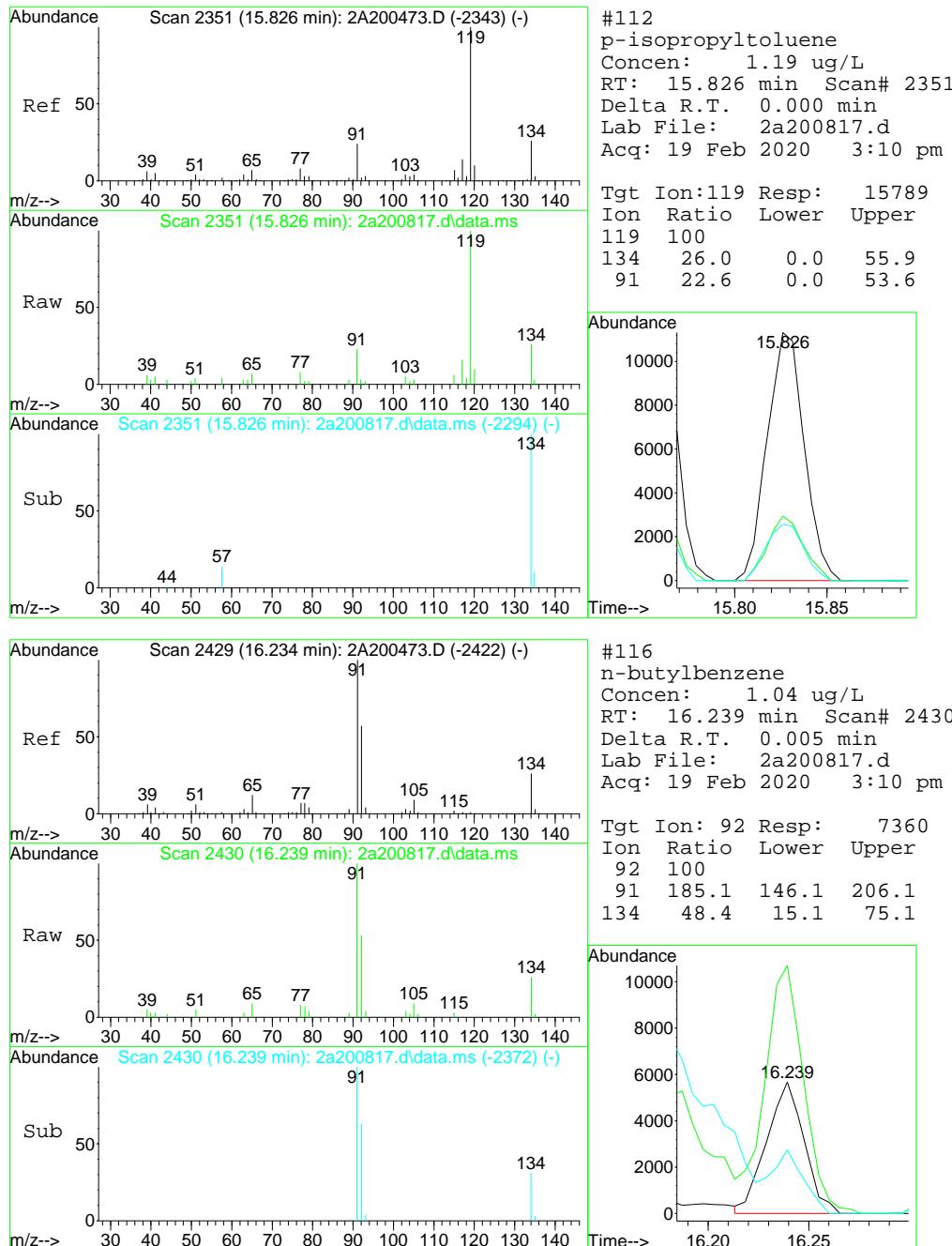


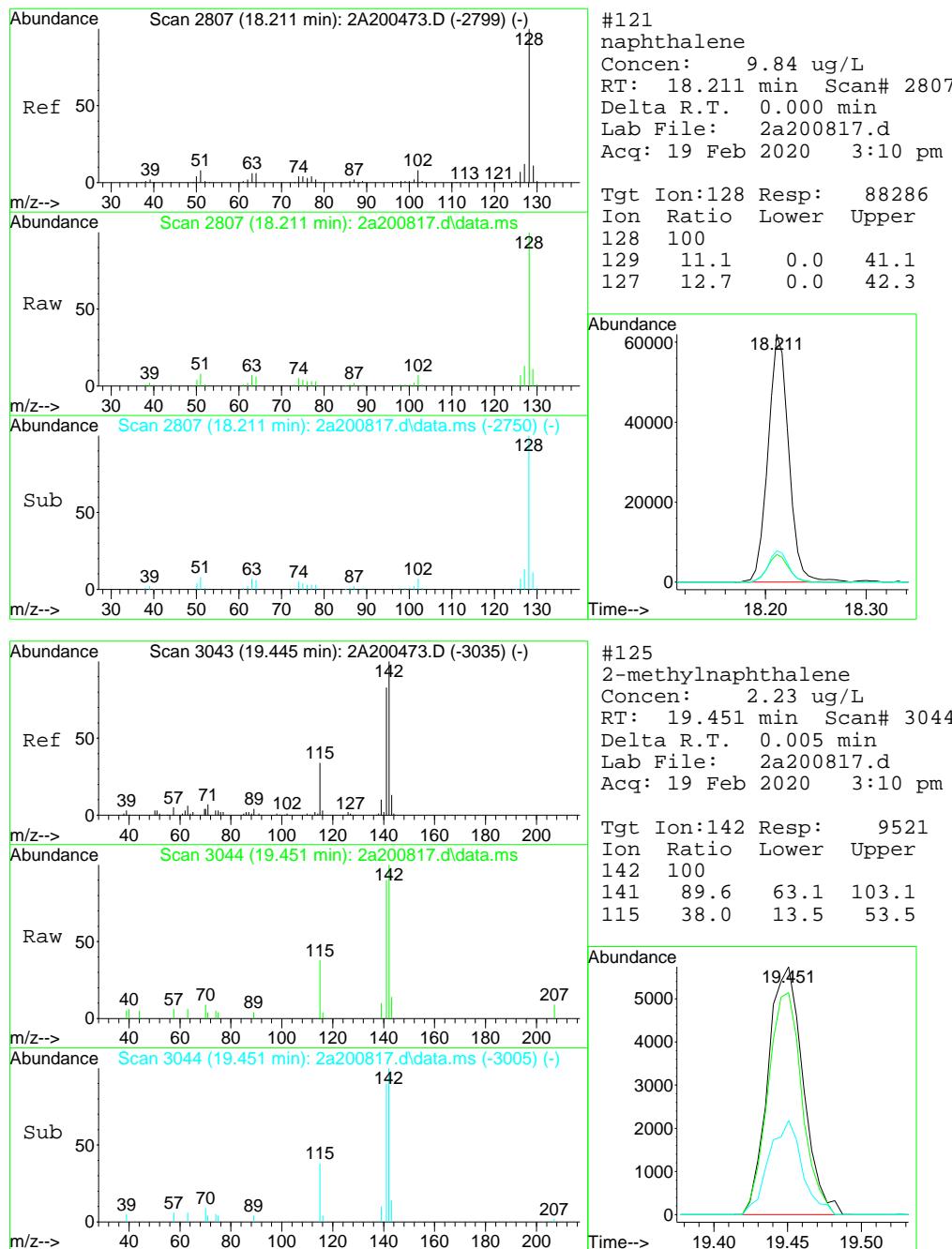












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319859.d
 Acq On : 18 Feb 2020 4:59 pm
 Operator : edwardd
 Sample : JD3305-2 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,5
 ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:35:35 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

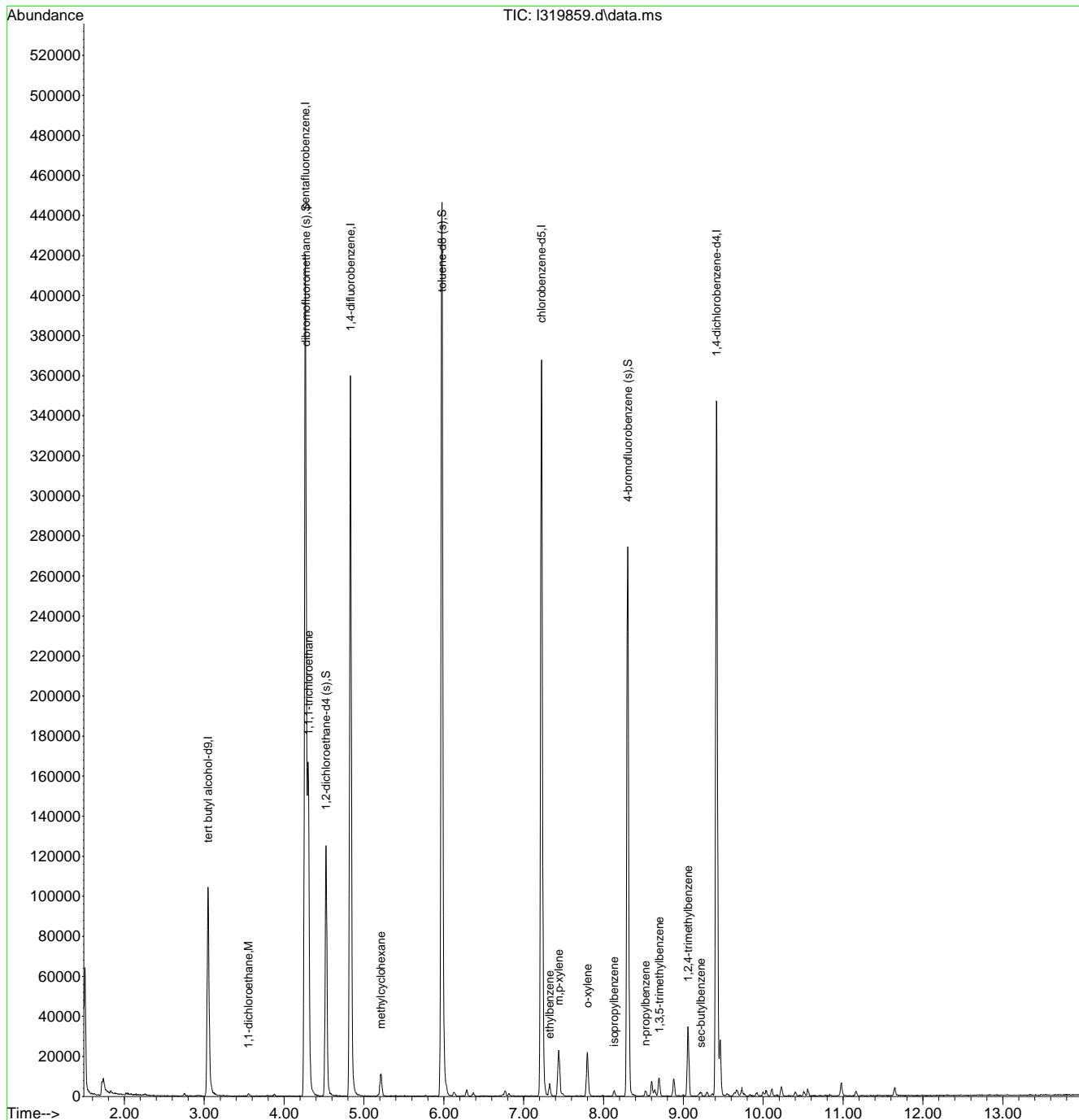
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	111701	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	201822	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	267928	50.00	ug/L	0.00
73) chlorobenzene-d5	7.222	117	221524	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	103267	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	74238	47.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	94.16%		
53) 1,2-dichloroethane-d4 (s)	4.523	65	68427	44.59	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	89.18%		
74) toluene-d8 (s)	5.977	98	286727	49.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.88%		
97) 4-bromofluorobenzene (s)	8.303	95	92569	46.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	92.48%		
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.554	63	1115	0.43	ug/L	68
46) 1,1,1-trichloroethane	4.305	97	87682	39.93	ug/L	98
66) methylcyclohexane	5.213	83	4422	2.09	ug/L	89
88) ethylbenzene	7.324	91	3324	0.55	ug/L	91
89) m,p-xylene	7.440	106	8209	3.41	ug/L	91
90) o-xylene	7.799	106	6648	2.85	ug/L	85
94) isopropylbenzene	8.133	105	2296	0.38	ug/L	66
102) n-propylbenzene	8.525	91	2787	0.41	ug/L	94
105) 1,3,5-trimethylbenzene	8.698	105	5758	1.19	ug/L	99
107) 1,2,4-trimethylbenzene	9.057	105	20141	4.14	ug/L	98
108) sec-butylbenzene	9.218	105	1830	0.32	ug/L	86
<hr/>						

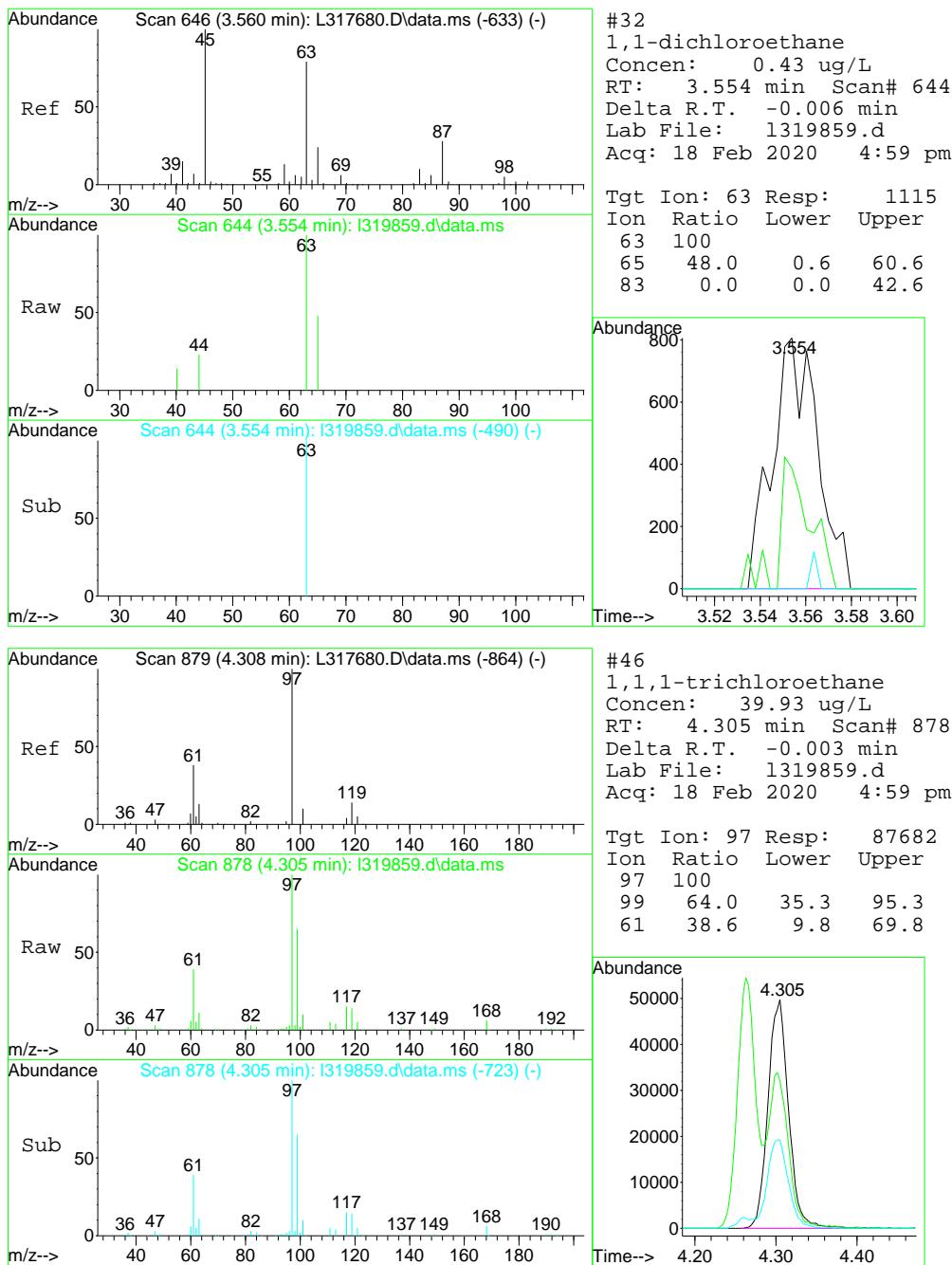
(#) = qualifier out of range (m) = manual integration (+) = signals summed

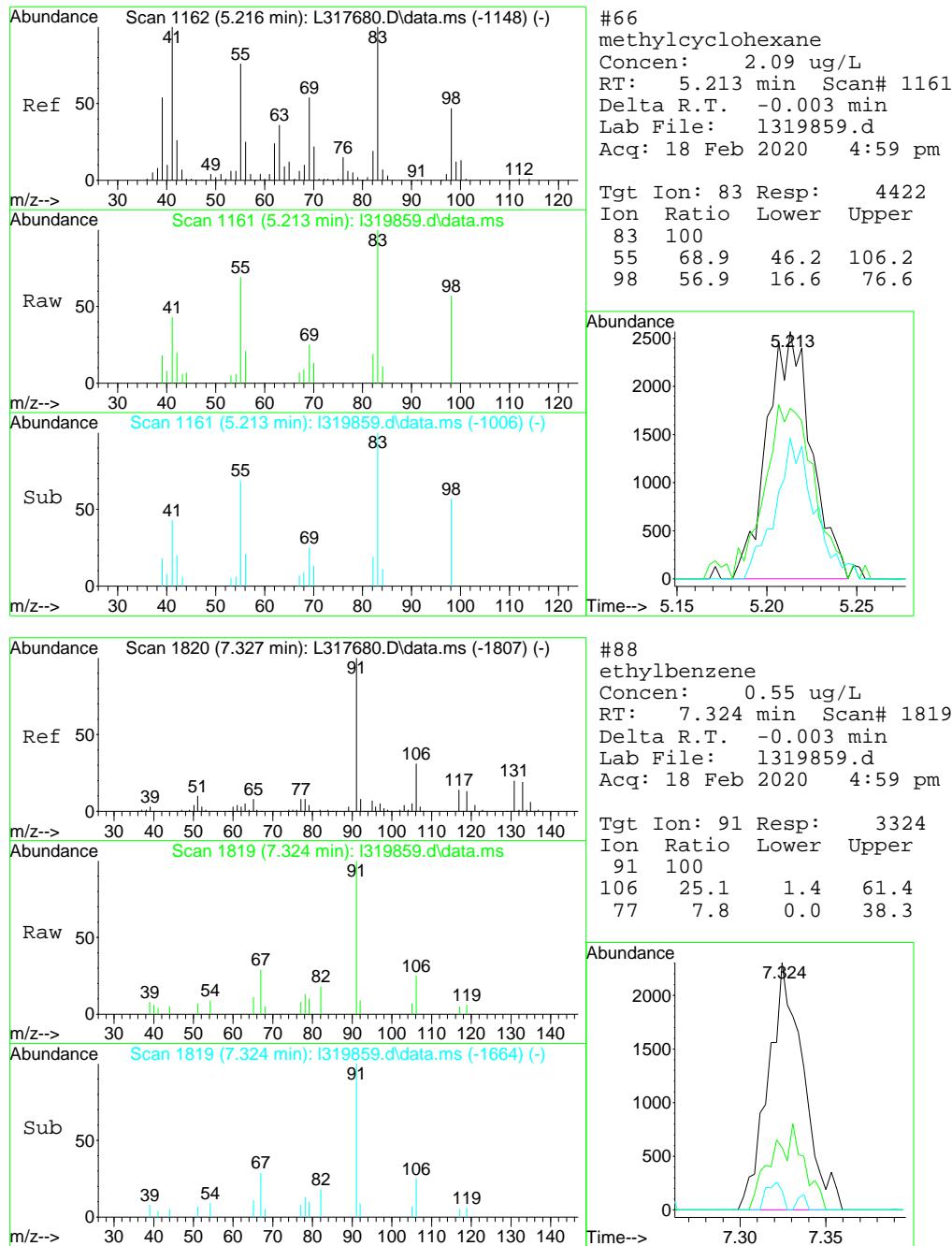
Quantitation Report (QT Reviewed)

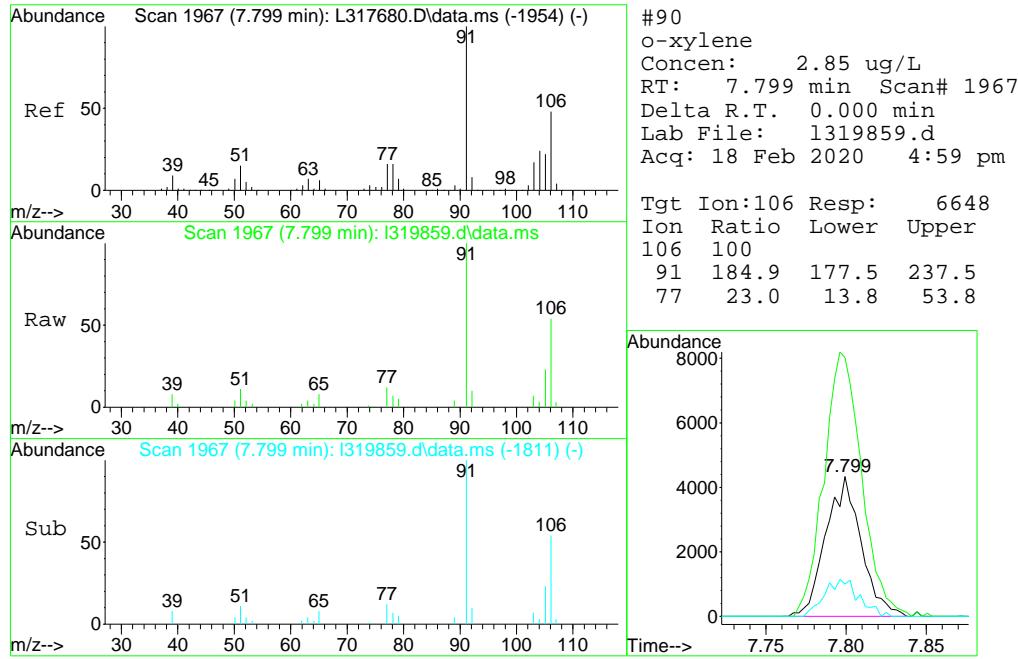
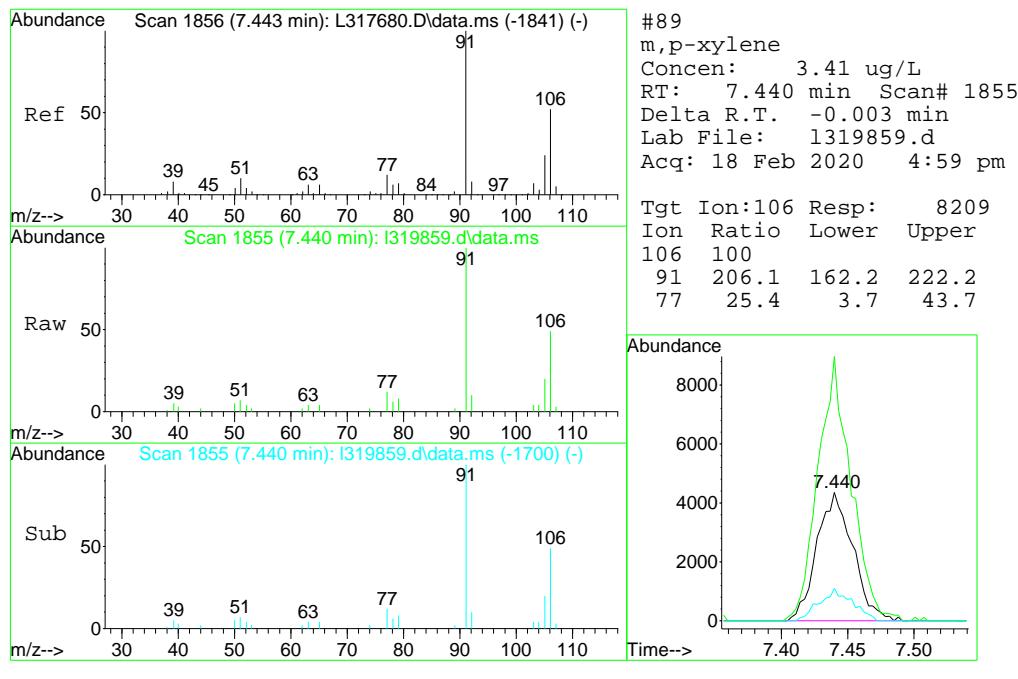
Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319859.d
 Acq On : 18 Feb 2020 4:59 pm
 Operator : edwardd
 Sample : JD3305-2
 Misc : MS41192,VL9424,5,,,5
 ALS Vial : 24 Sample Multiplier: 1
 Inst : GCMSL

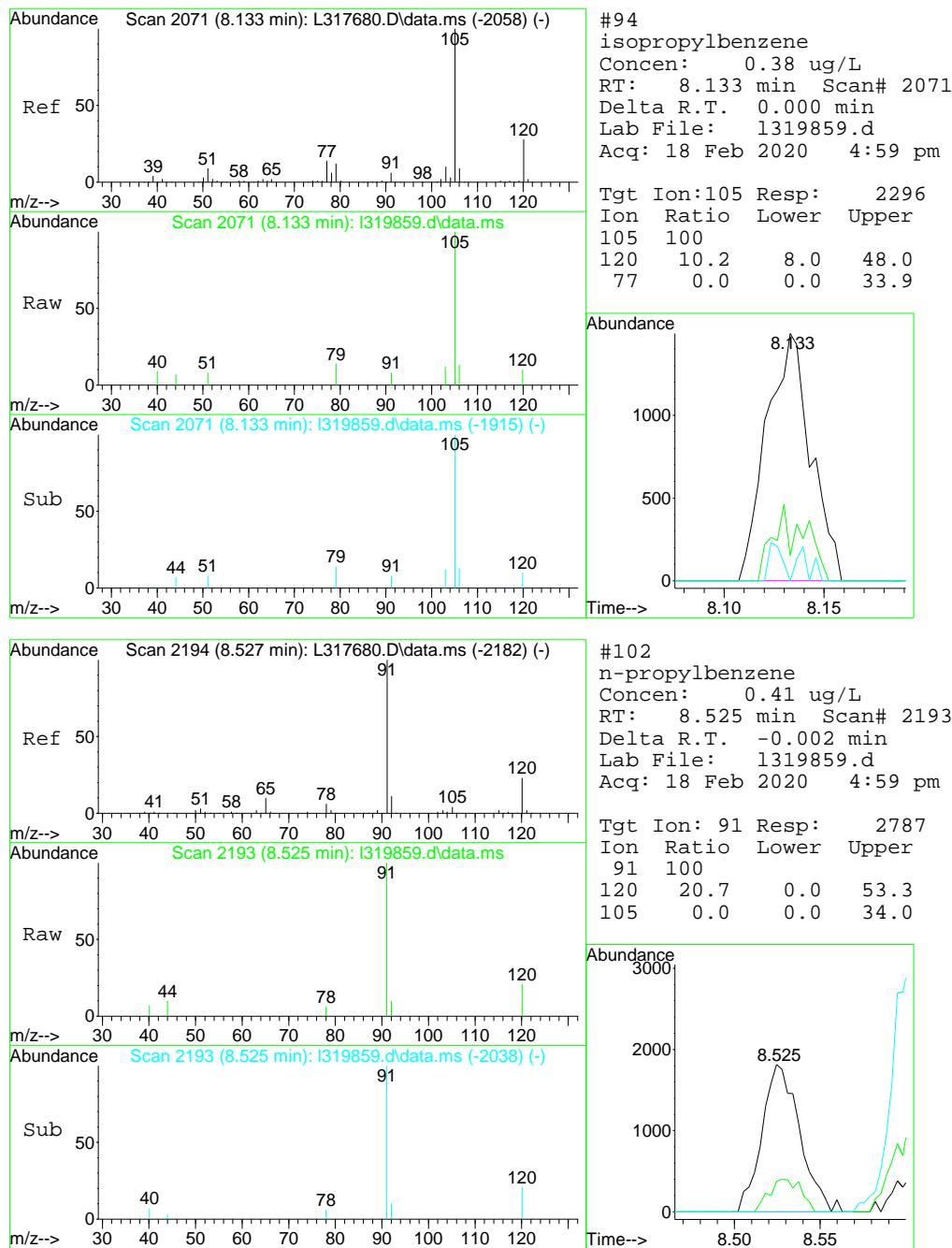
Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:35:35 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

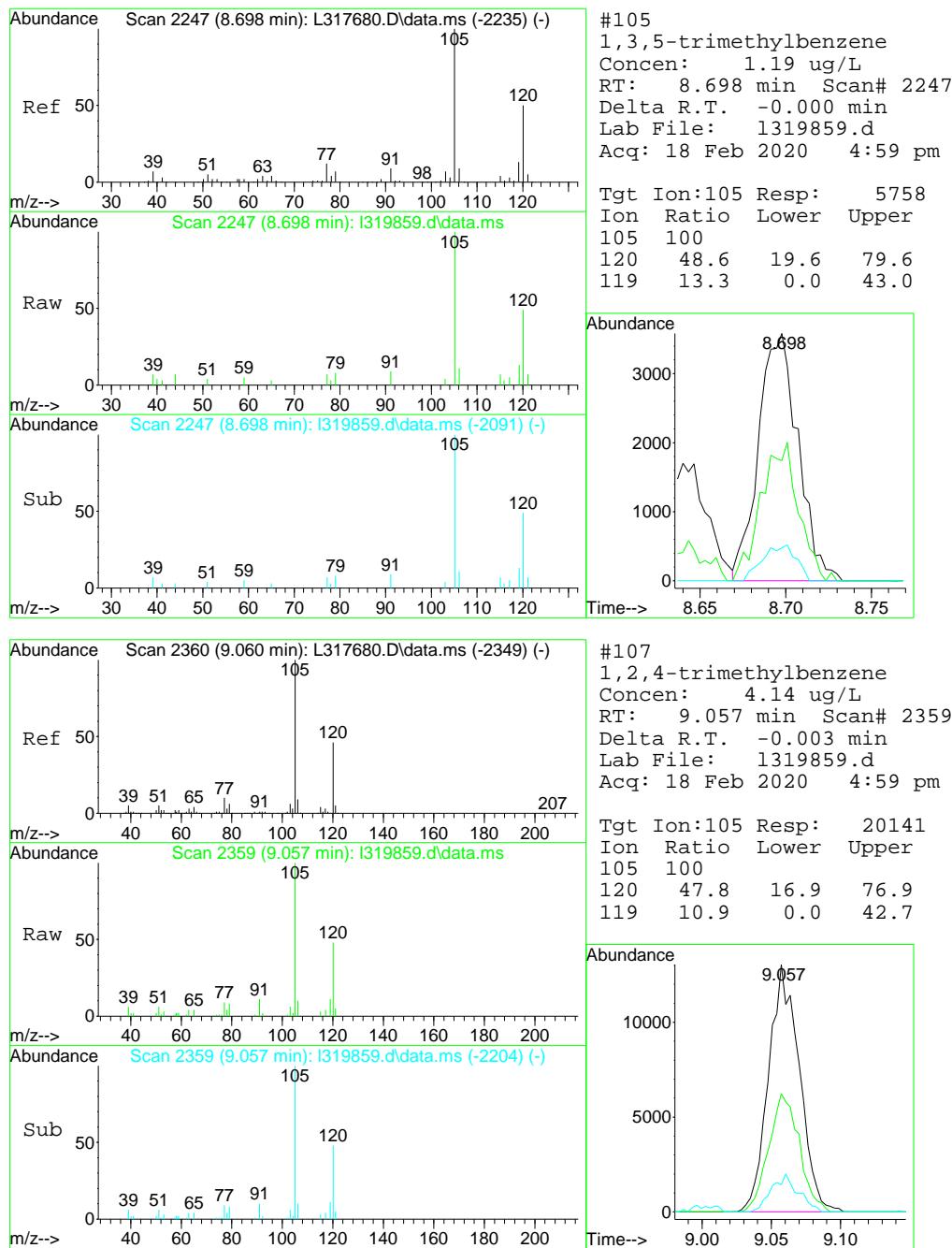


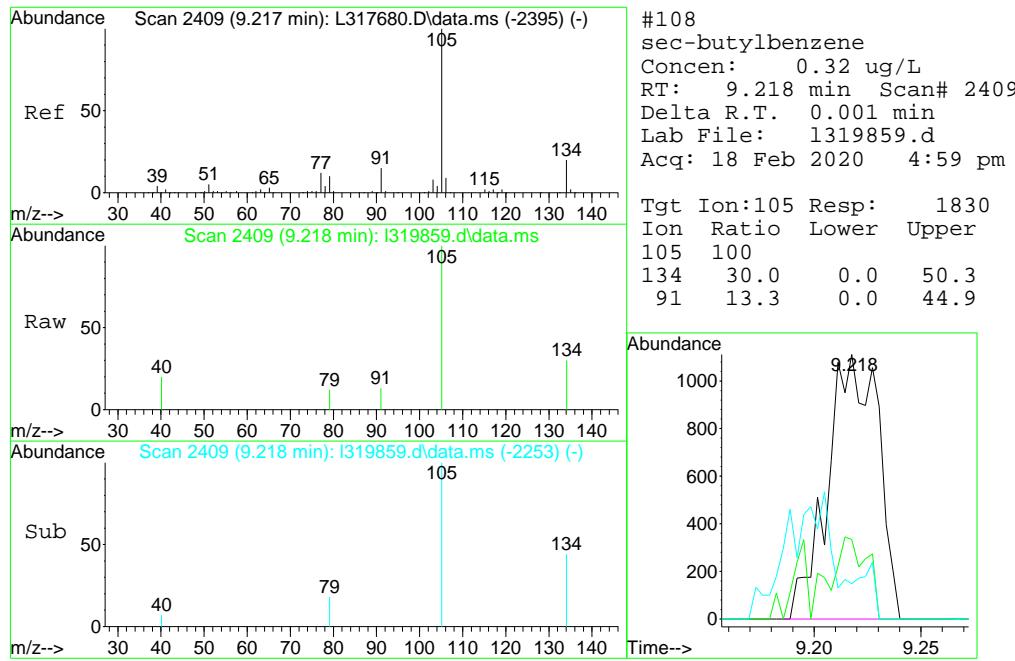












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319850.d
 Acq On : 18 Feb 2020 12:56 pm
 Operator : edwardd
 Sample : JD3305-3 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:24:44 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

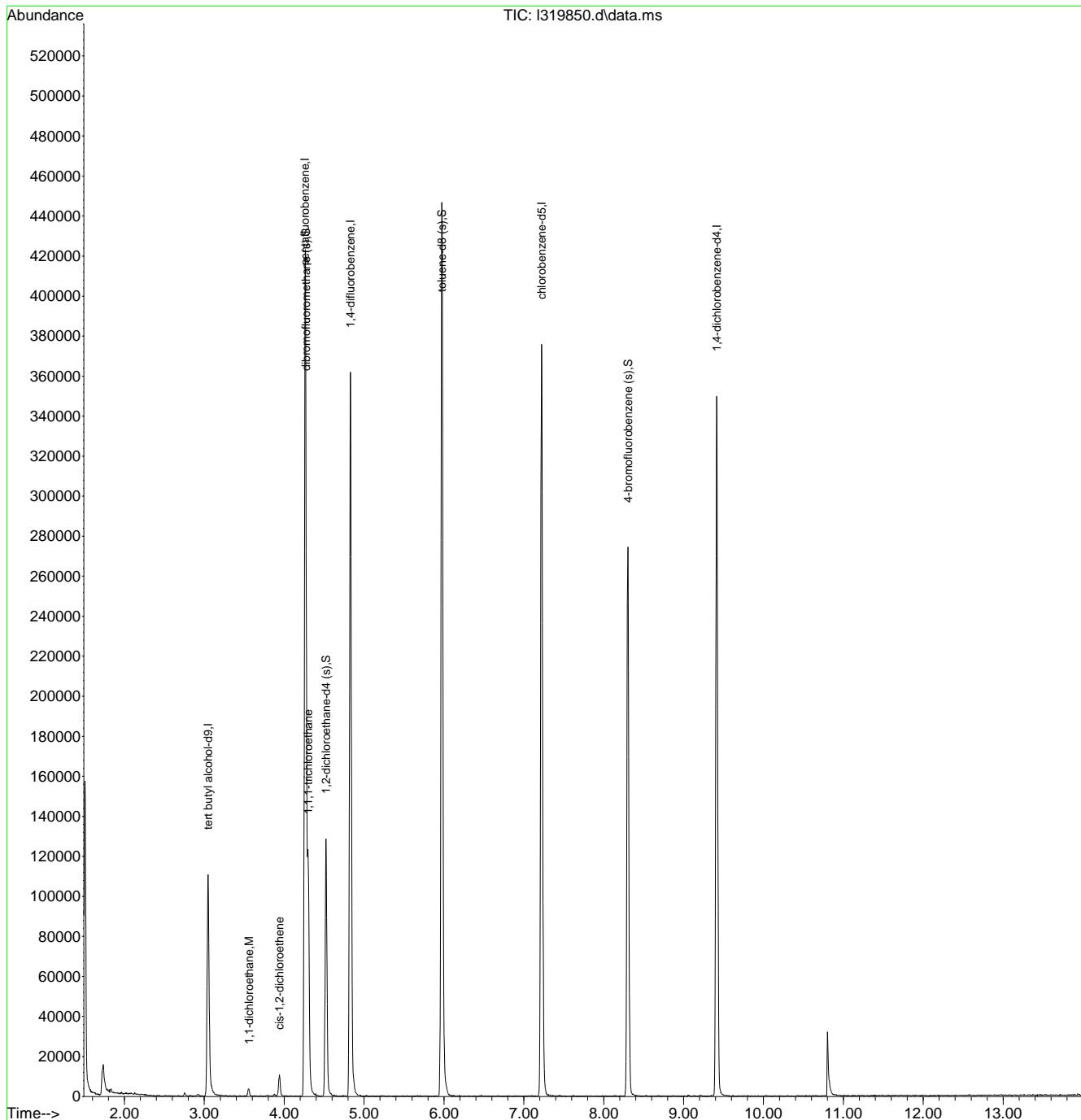
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	120467	500.00	ug/L	0.00
5) pentafluorobenzene	4.260	168	208587	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.828	114	275793	50.00	ug/L	0.00
73) chlorobenzene-d5	7.222	117	225574	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	104570	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	76694	47.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	94.12%		
53) 1,2-dichloroethane-d4 (s)	4.523	65	70106	44.38	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	88.76%		
74) toluene-d8 (s)	5.973	98	296618	50.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.48%		
97) 4-bromofluorobenzene (s)	8.303	95	94586	46.66	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.32%		
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.557	63	3211	1.19	ug/L	96
38) cis-1,2-dichloroethene	3.942	96	4088	2.45	ug/L	85
46) 1,1,1-trichloroethane	4.302	97	59139	26.06	ug/L	97

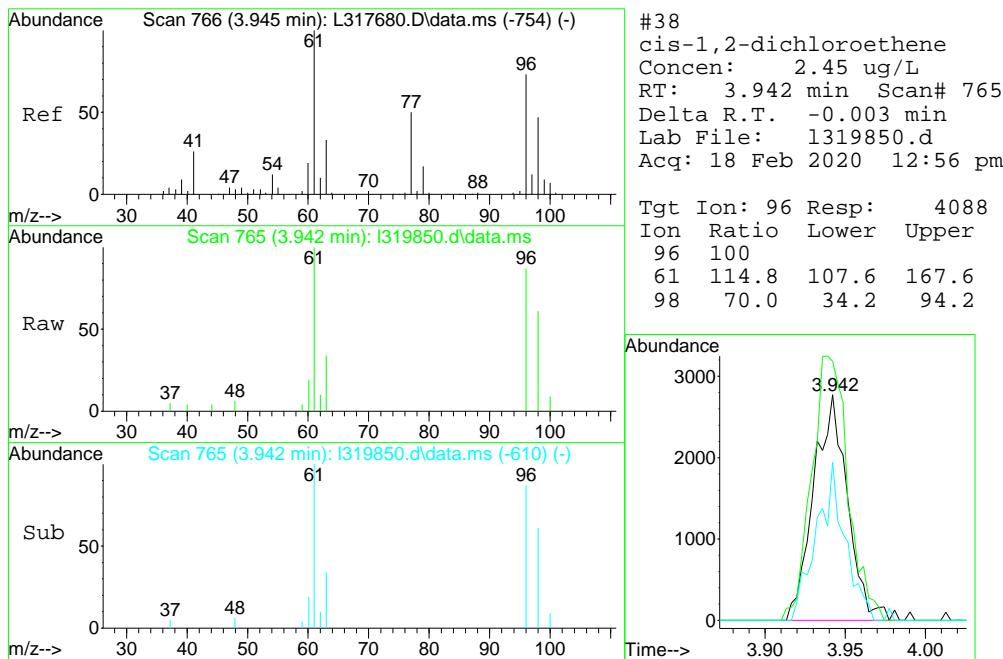
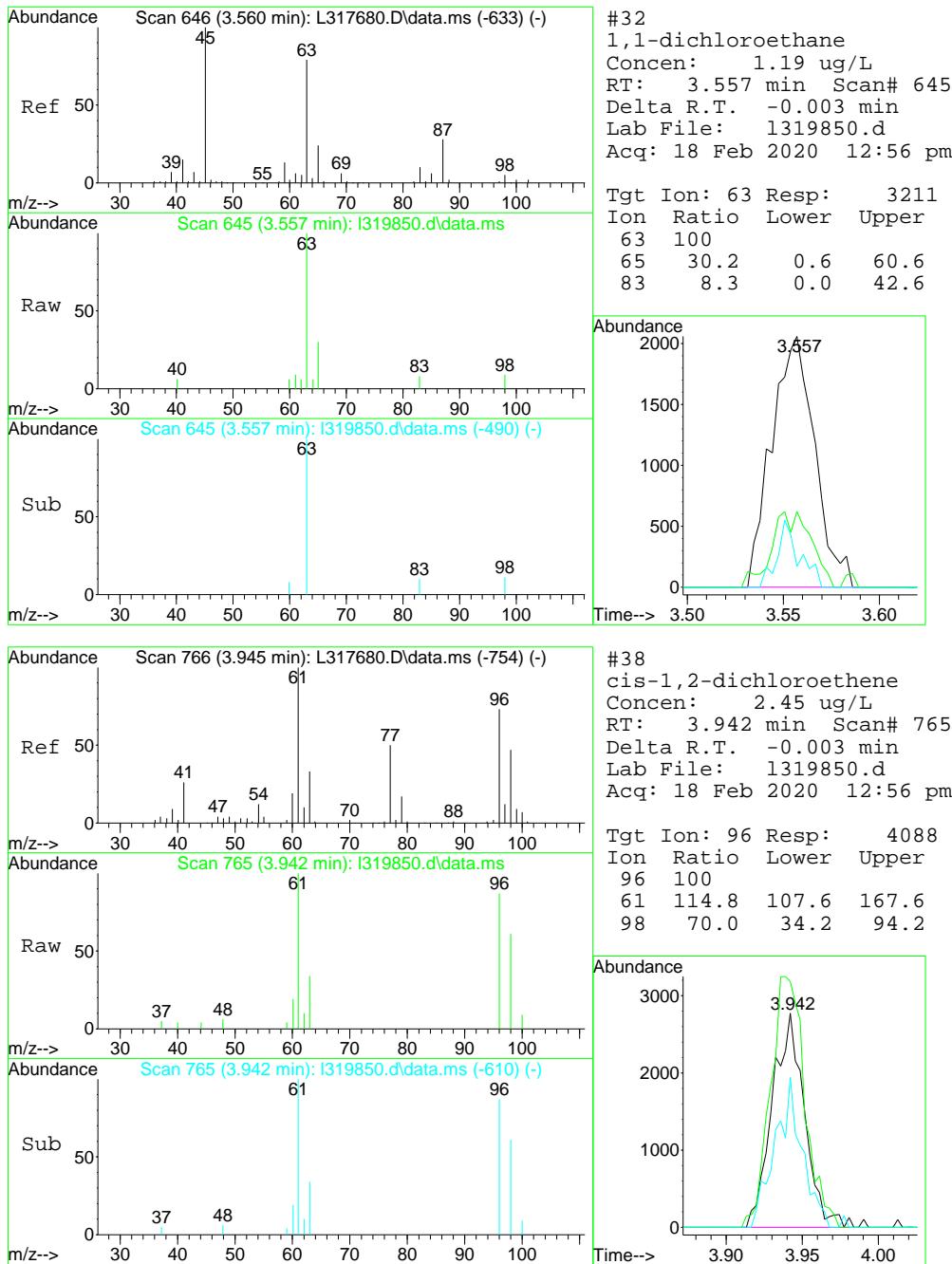
(#) = qualifier out of range (m) = manual integration (+) = signals summed

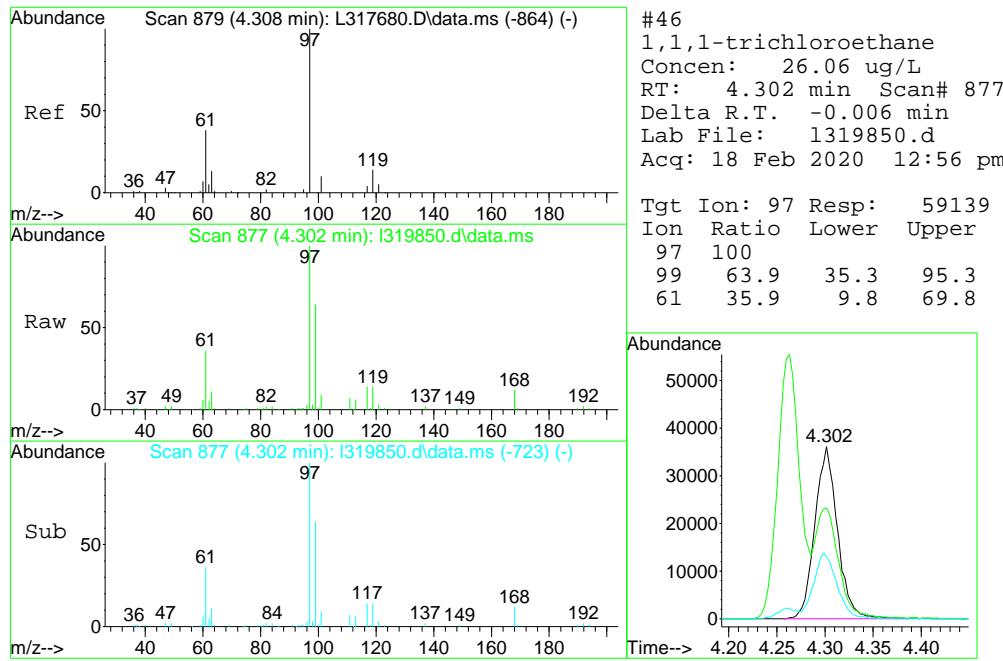
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319850.d
 Acq On : 18 Feb 2020 12:56 pm
 Operator : edwardd
 Sample : JD3305-3
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 15 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:24:44 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319851.d
 Acq On : 18 Feb 2020 1:23 pm
 Operator : edwardd
 Sample : JD3305-4 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:27:13 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

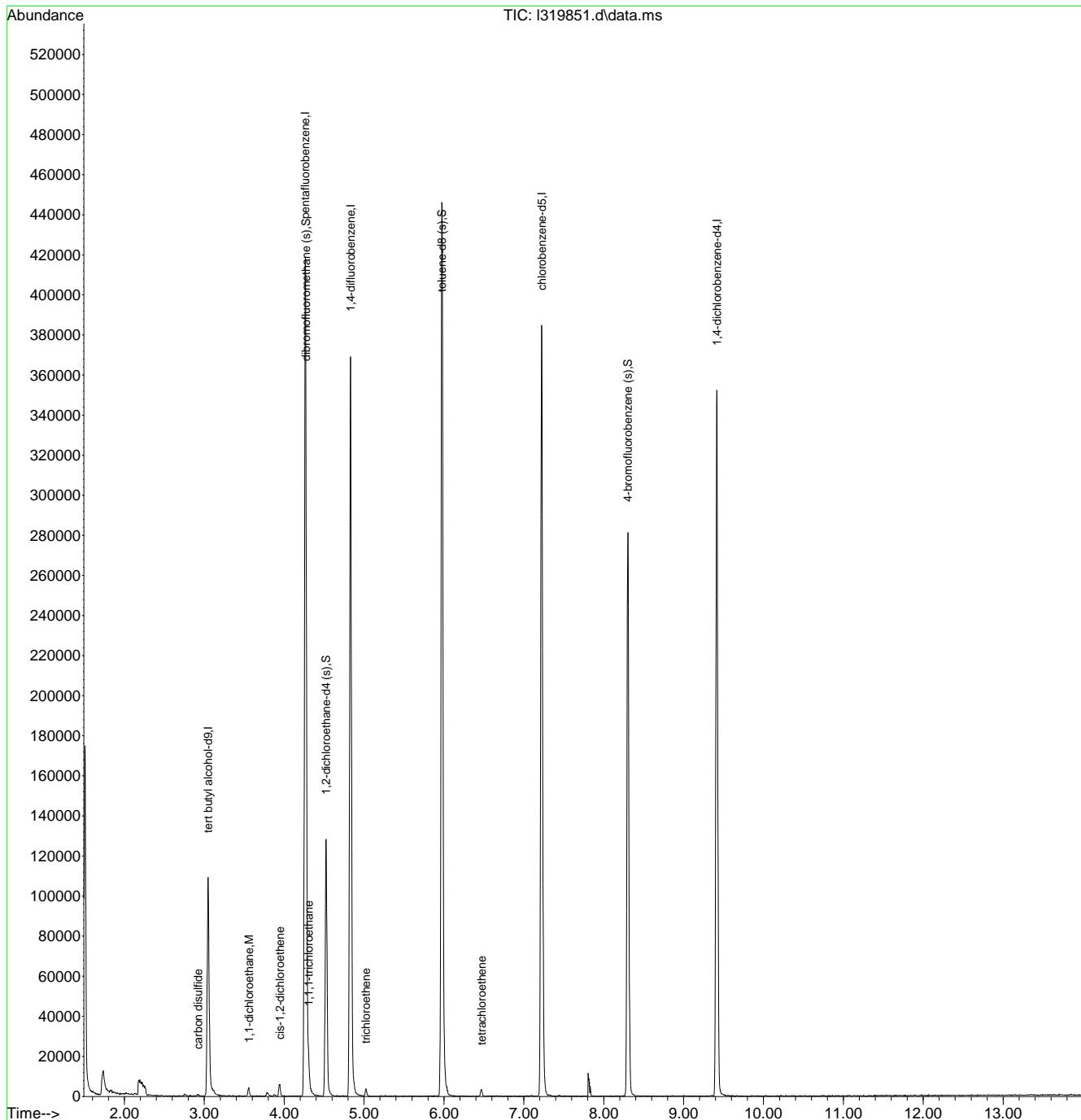
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	116456	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	206722	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	278609	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	227470	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	103064	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	77985	48.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.58%		
53) 1,2-dichloroethane-d4 (s)	4.523	65	71198	44.62	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	89.24%		
74) toluene-d8 (s)	5.973	98	294747	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	100.00%		
97) 4-bromofluorobenzene (s)	8.300	95	96387	48.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.48%		
<hr/>						
Target Compounds						
23) carbon disulfide	2.922	76	899	0.24	ug/L	64
32) 1,1-dichloroethane	3.557	63	3185	1.19	ug/L	95
38) cis-1,2-dichloroethene	3.945	96	2062	1.25	ug/L	84
46) 1,1,1-trichloroethane	4.305	97	4133	1.84	ug/L #	65
60) trichloroethene	5.023	95	994	0.69	ug/L	86
80) tetrachloroethene	6.471	166	1100	0.66	ug/L	87

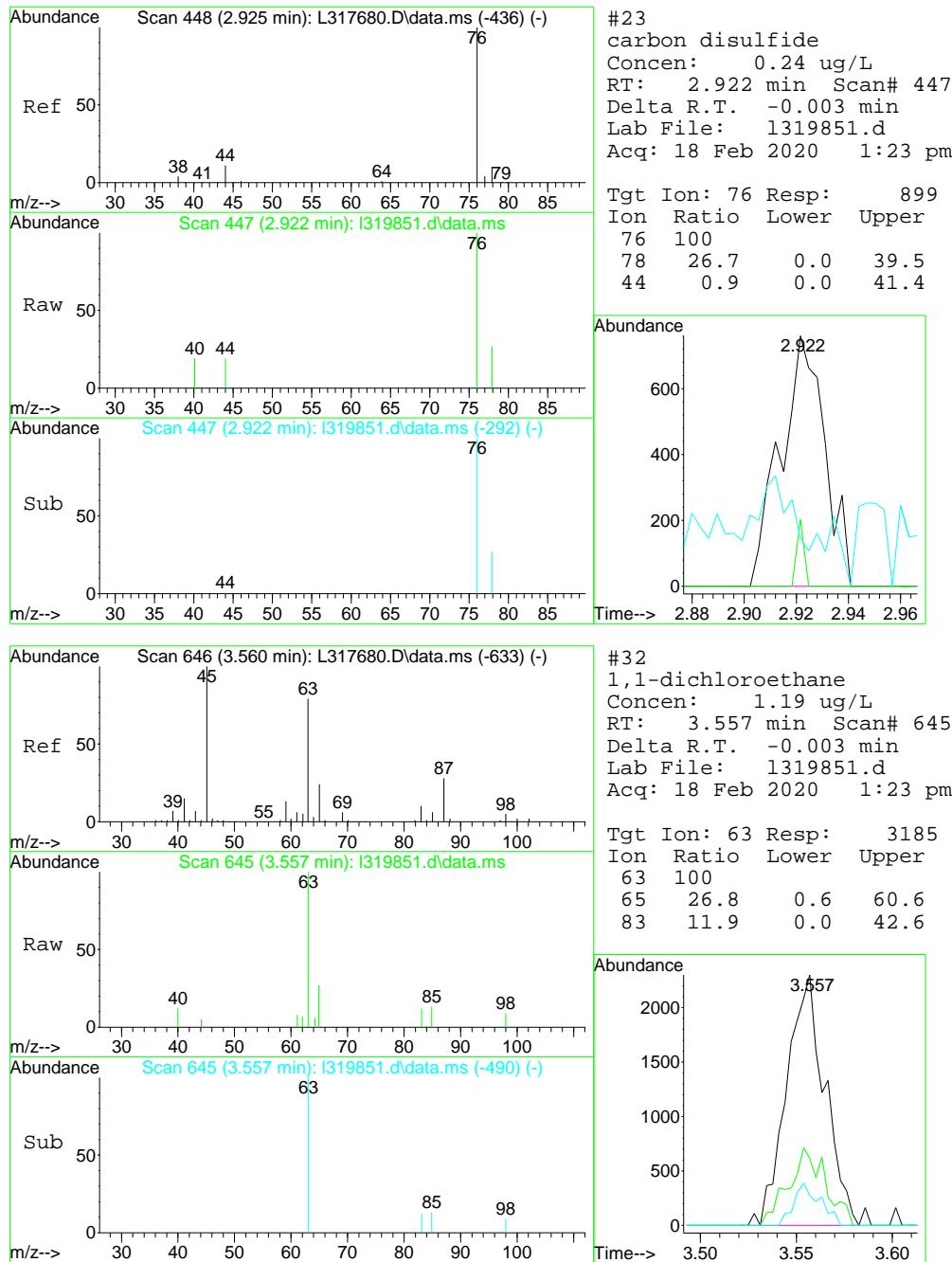
(#) = qualifier out of range (m) = manual integration (+) = signals summed

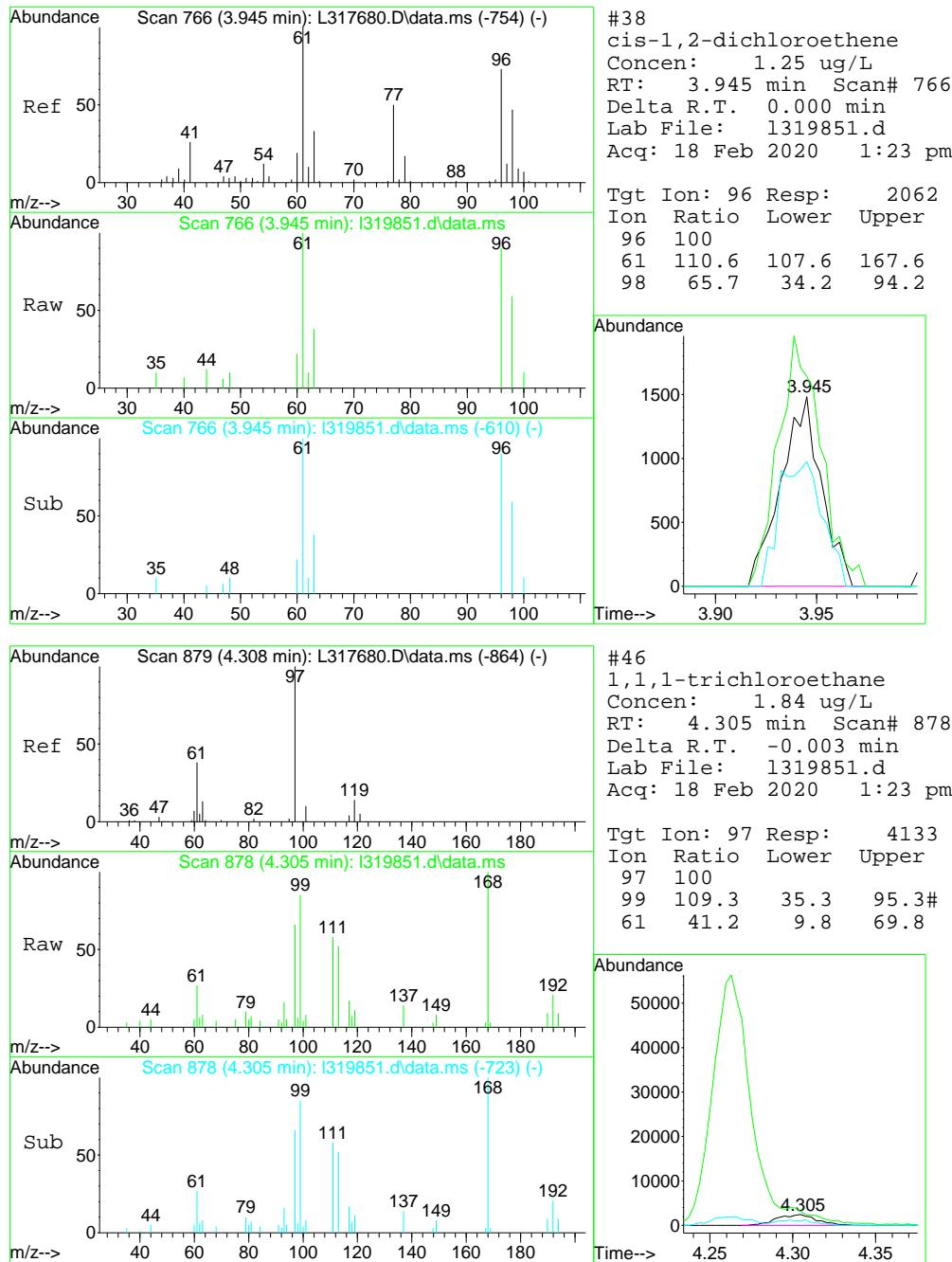
Quantitation Report (QT Reviewed)

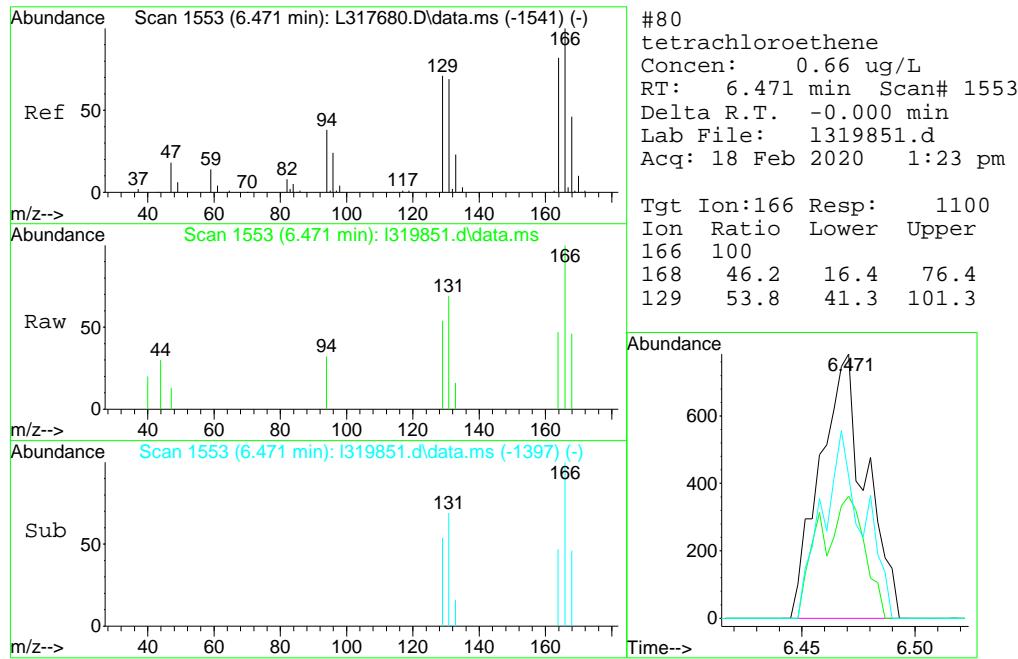
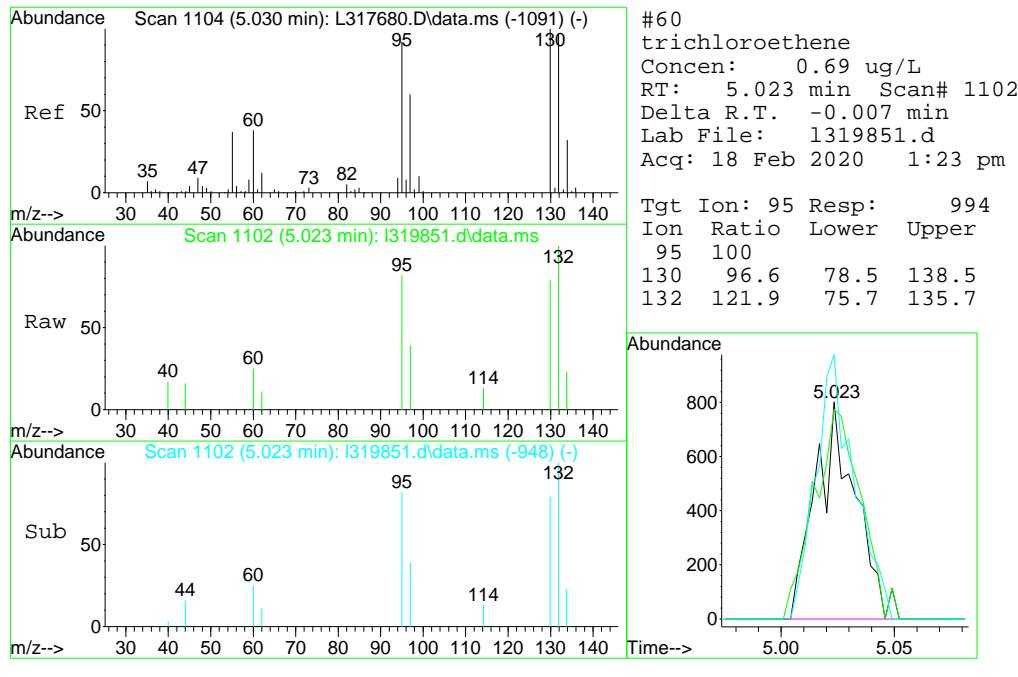
Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319851.d
 Acq On : 18 Feb 2020 1:23 pm
 Operator : edwardd
 Sample : JD3305-4
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 16 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:27:13 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319852.d
 Acq On : 18 Feb 2020 1:50 pm
 Operator : edwardd
 Sample : JD3305-5 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:28:08 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

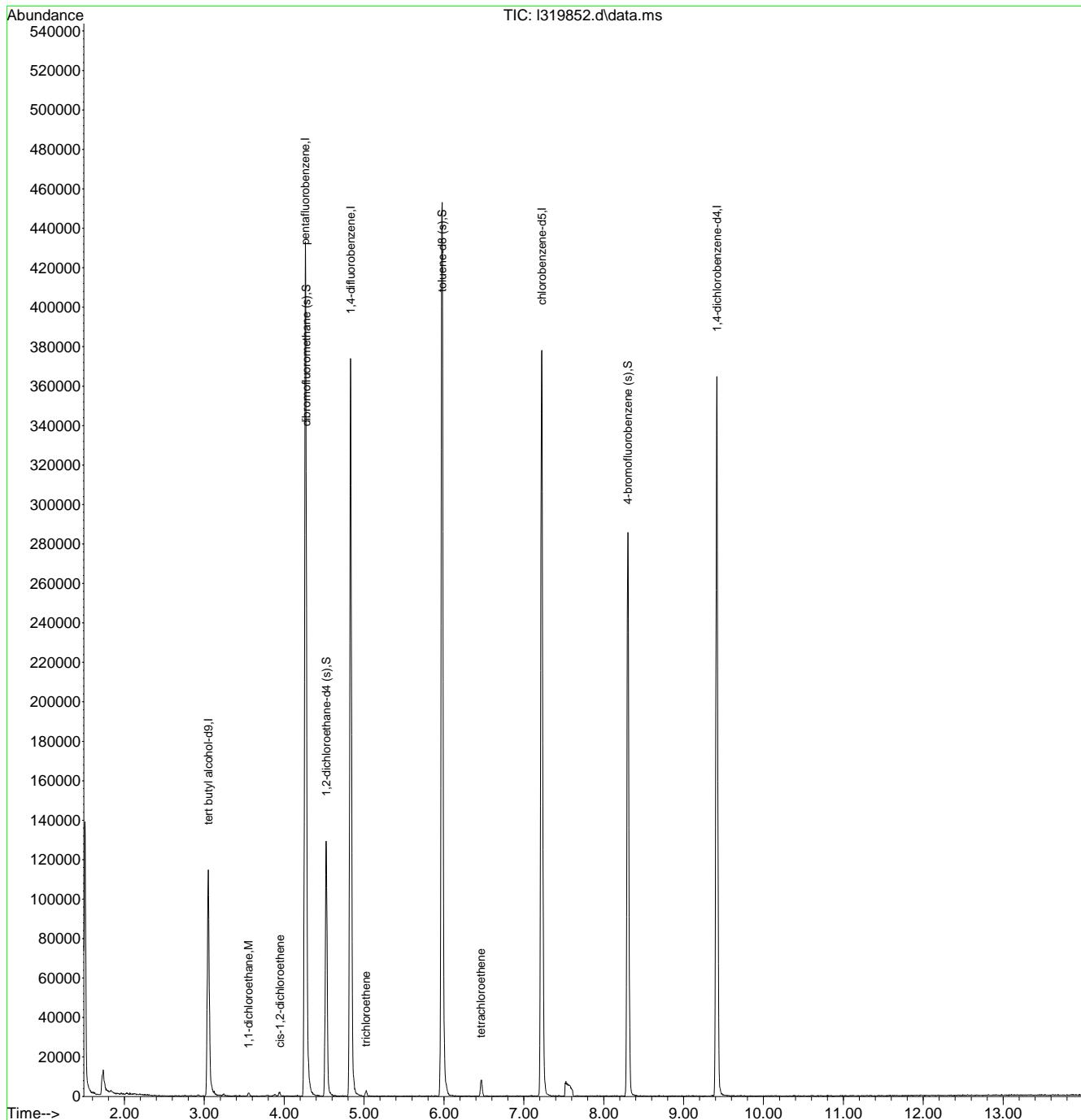
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	122440	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	211579	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	282266	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	233044	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	106689	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	77417	46.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.68%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	73207	45.28	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	90.56%		
74) toluene-d8 (s)	5.976	98	300688	49.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.56%		
97) 4-bromofluorobenzene (s)	8.300	95	96414	46.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.22%		
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.554	63	1516	0.55	ug/L	91
38) cis-1,2-dichloroethene	3.945	96	820	0.48	ug/L #	63
60) trichloroethene	5.023	95	785	0.53	ug/L	78
80) tetrachloroethene	6.461	166	2787	1.64	ug/L	78

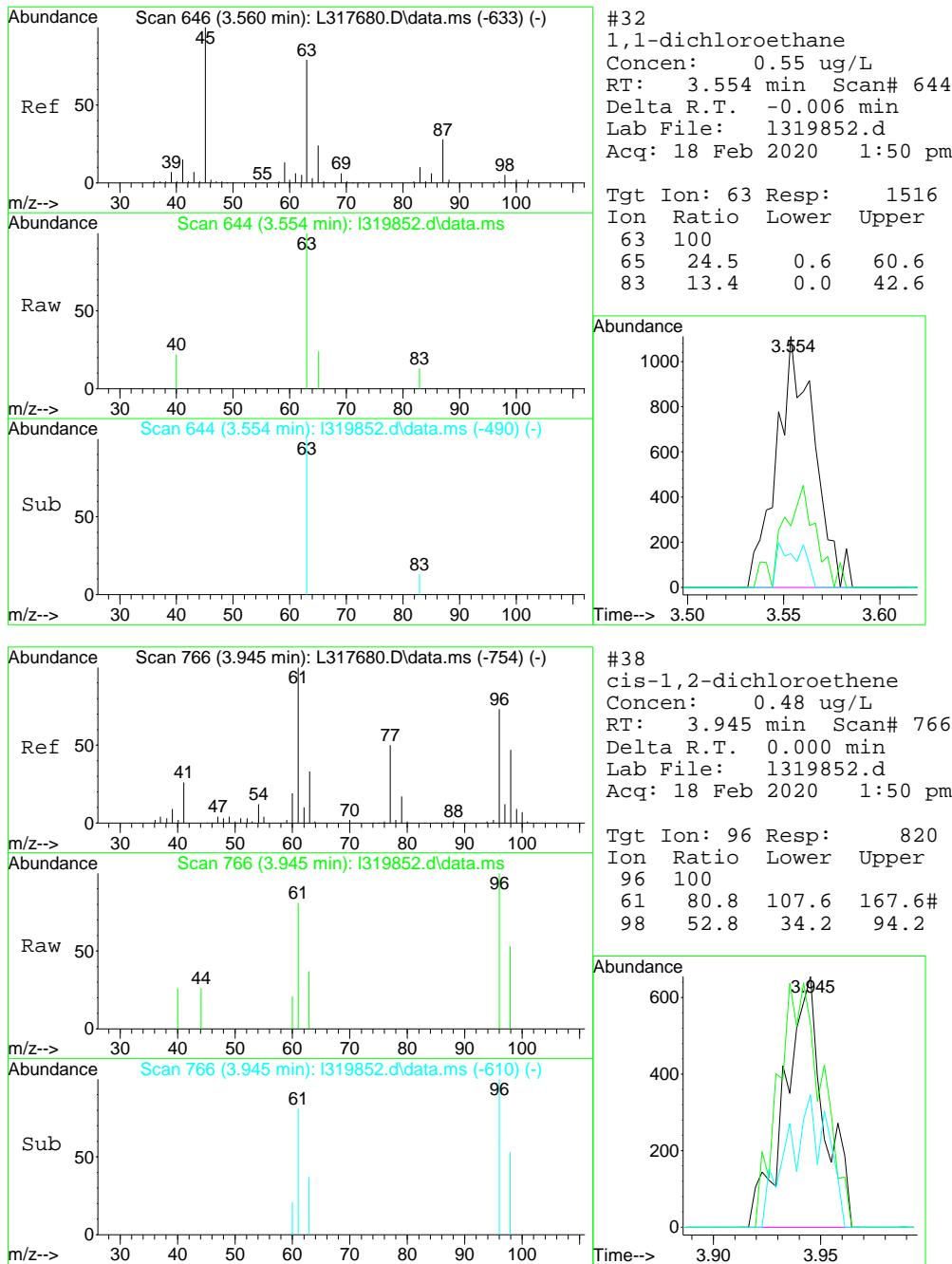
(#) = qualifier out of range (m) = manual integration (+) = signals summed

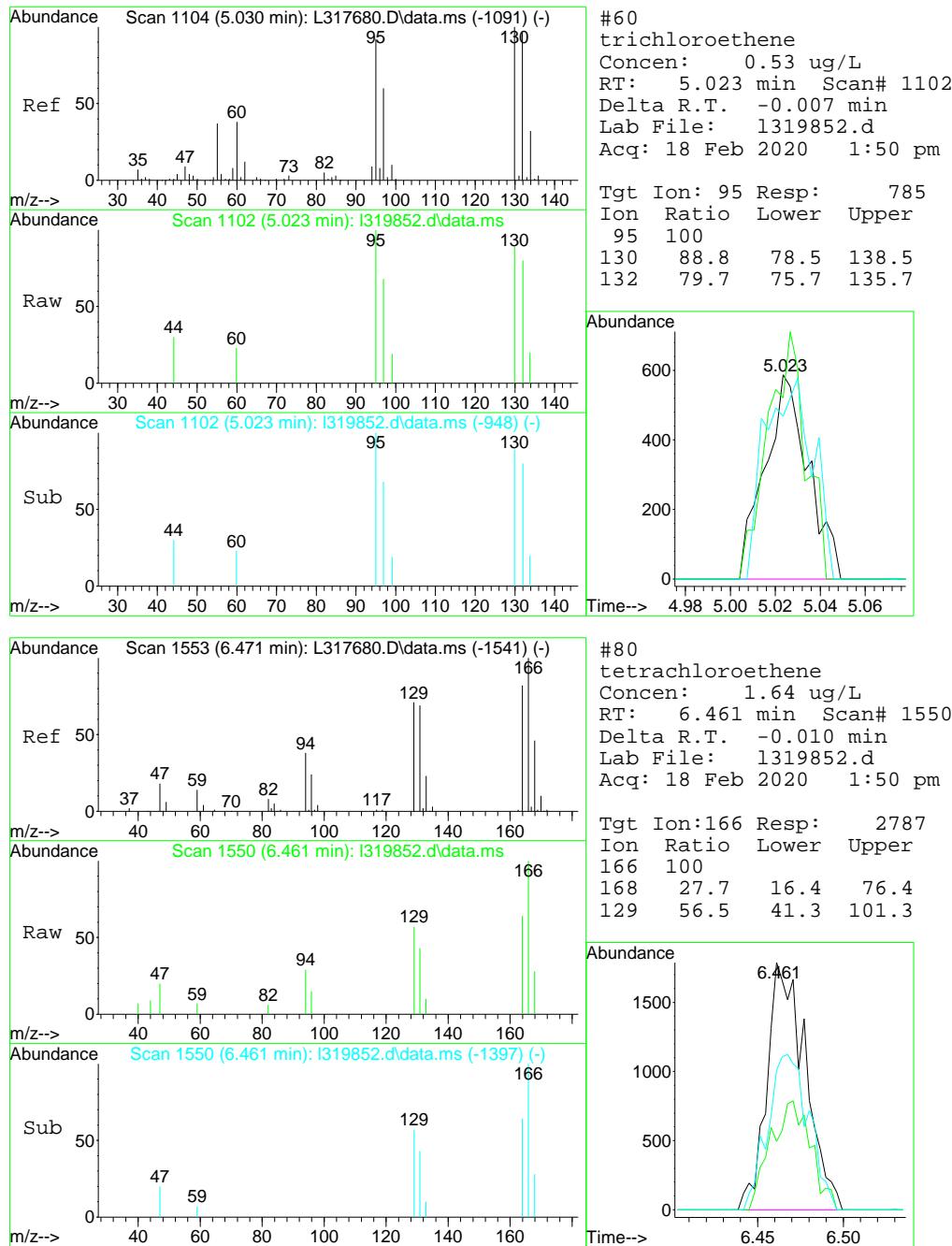
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319852.d
 Acq On : 18 Feb 2020 1:50 pm
 Operator : edwardd
 Sample : JD3305-5
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 17 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:28:08 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319853.d
 Acq On : 18 Feb 2020 2:17 pm
 Operator : edwardd
 Sample : JD3305-6 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:29:00 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

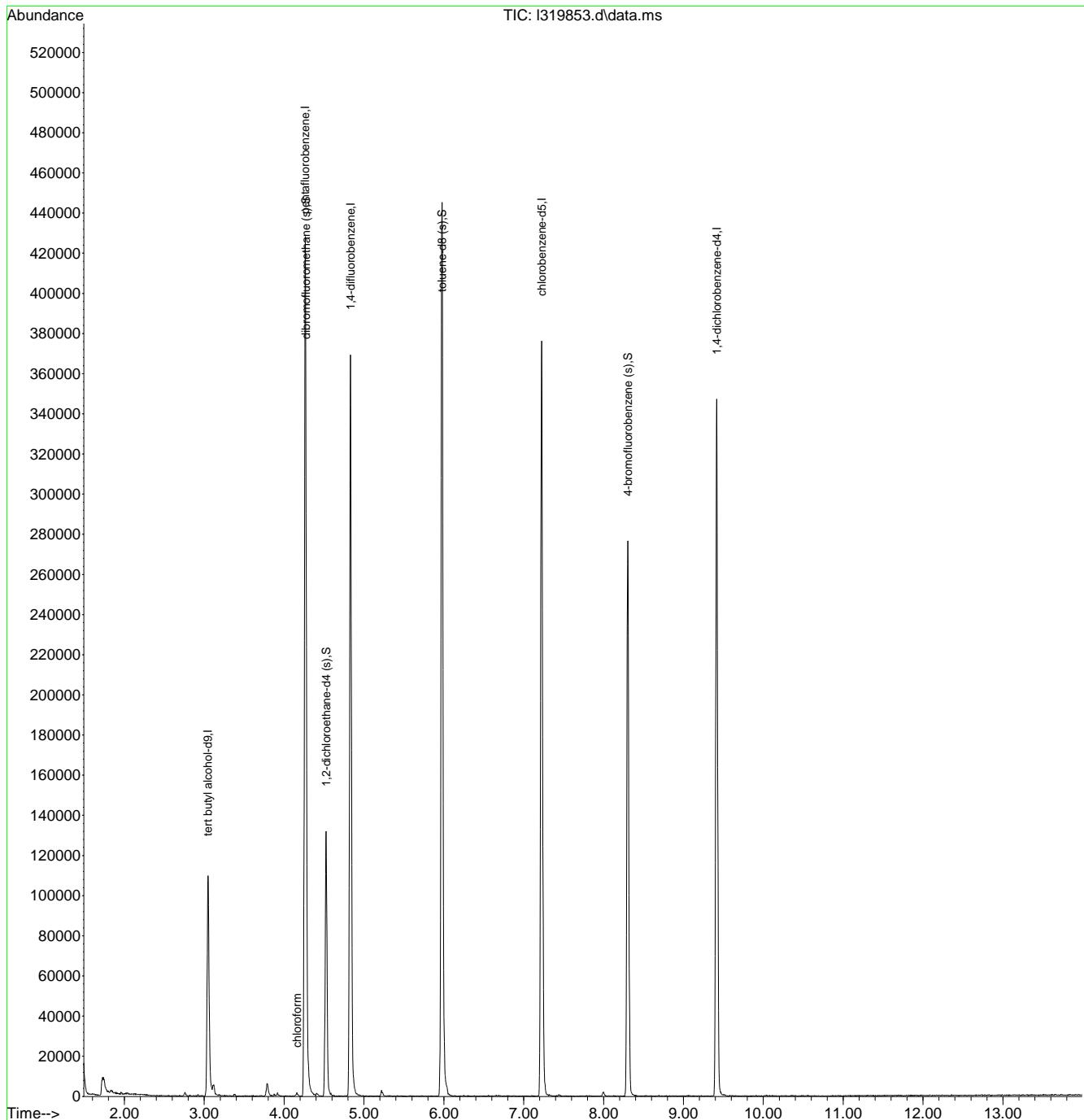
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.044	65	119036	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	208485	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	275594	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	224960	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	103179	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	76713	47.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.20%			
53) 1,2-dichloroethane-d4 (s)	4.526	65	72296	45.80	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 91.60%			
74) toluene-d8 (s)	5.977	98	294548	50.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.04%			
97) 4-bromofluorobenzene (s)	8.303	95	94784	47.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 94.76%			
<hr/>						
Target Compounds						
43) chloroform	4.160	83	1205	0.45	ug/L	75
<hr/>						

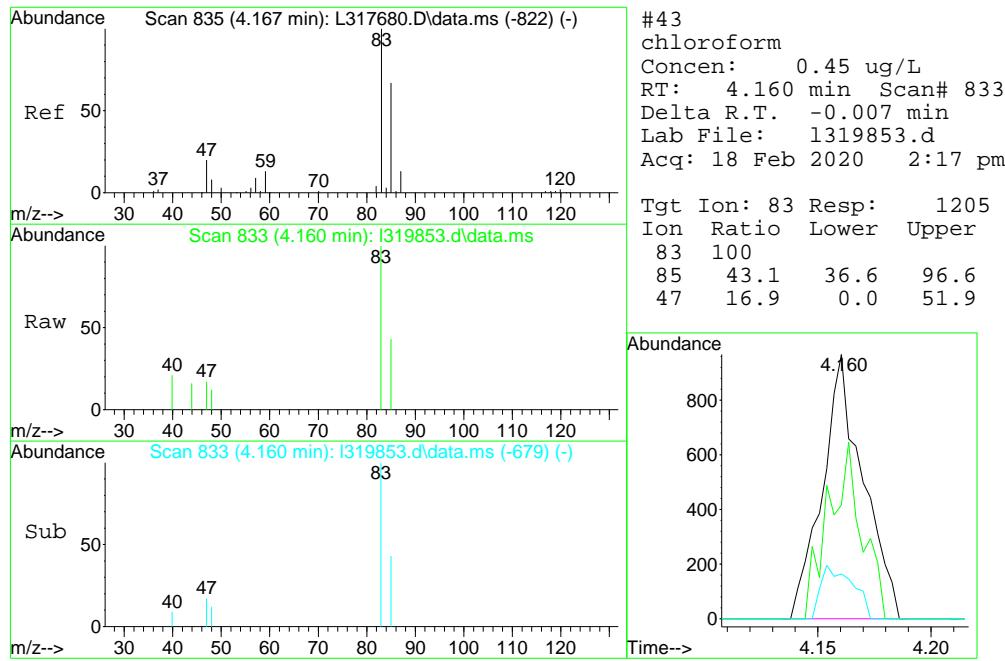
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319853.d
 Acq On : 18 Feb 2020 2:17 pm
 Operator : edwardd
 Sample : JD3305-6
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 18 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:29:00 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319854.d
 Acq On : 18 Feb 2020 2:44 pm
 Operator : edwardd
 Sample : JD3305-7 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:29:42 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

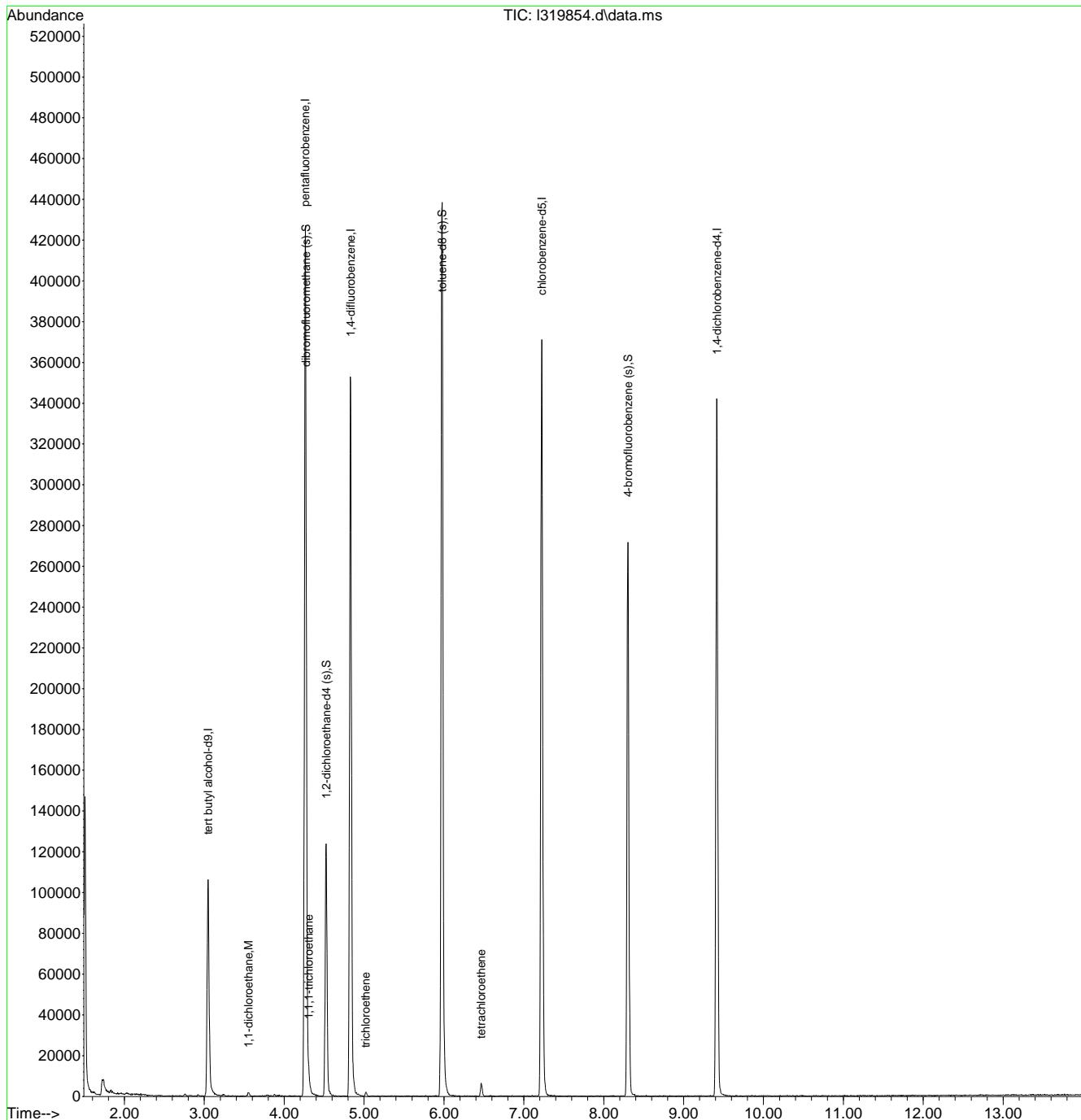
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	114123	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	207479	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	276039	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	223742	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	102777	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	75002	46.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.54%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	69375	43.88	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	87.76%	
74) toluene-d8 (s)	5.977	98	291420	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.52%	
97) 4-bromofluorobenzene (s)	8.303	95	93250	46.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.60%	
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.554	63	1559	0.58	ug/L	96
46) 1,1,1-trichloroethane	4.305	97	1845	0.82	ug/L #	73
60) trichloroethene	5.020	95	557	0.39	ug/L #	74
80) tetrachloroethene	6.468	166	1861	1.14	ug/L	84

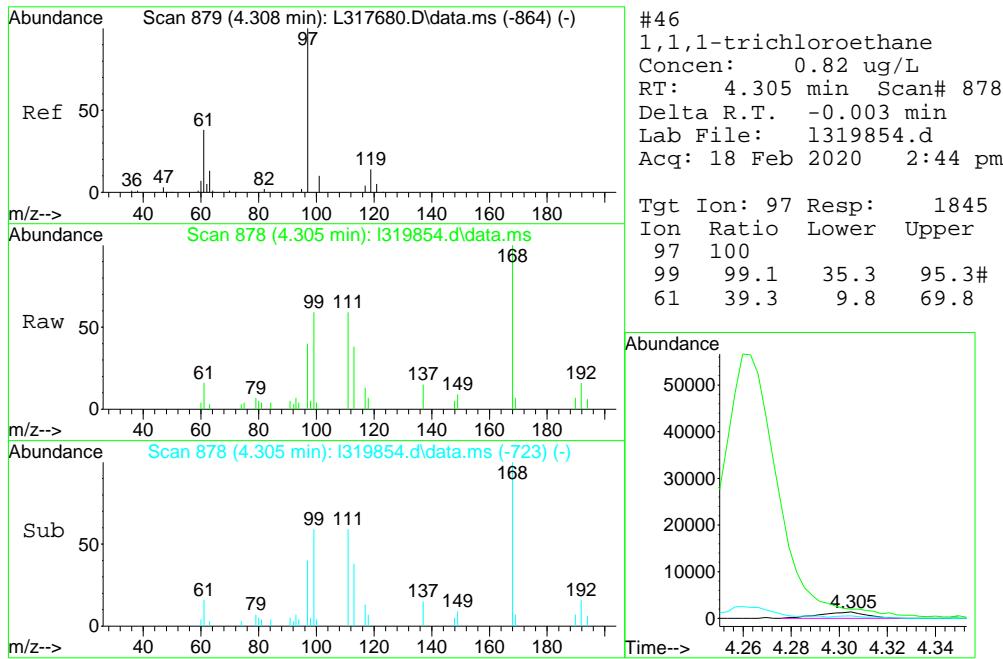
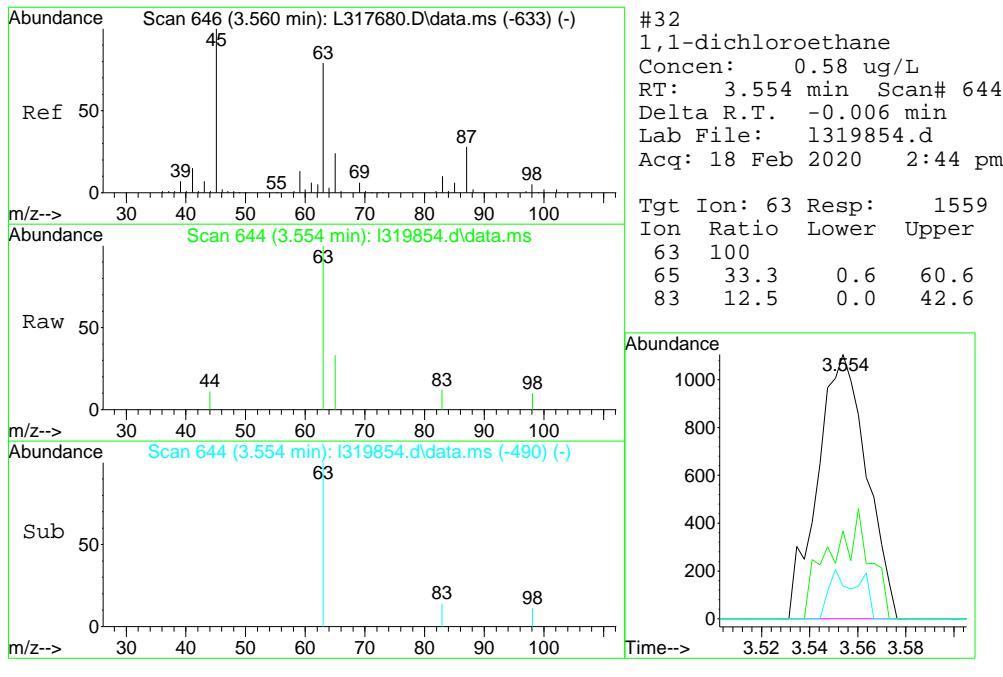
(#) = qualifier out of range (m) = manual integration (+) = signals summed

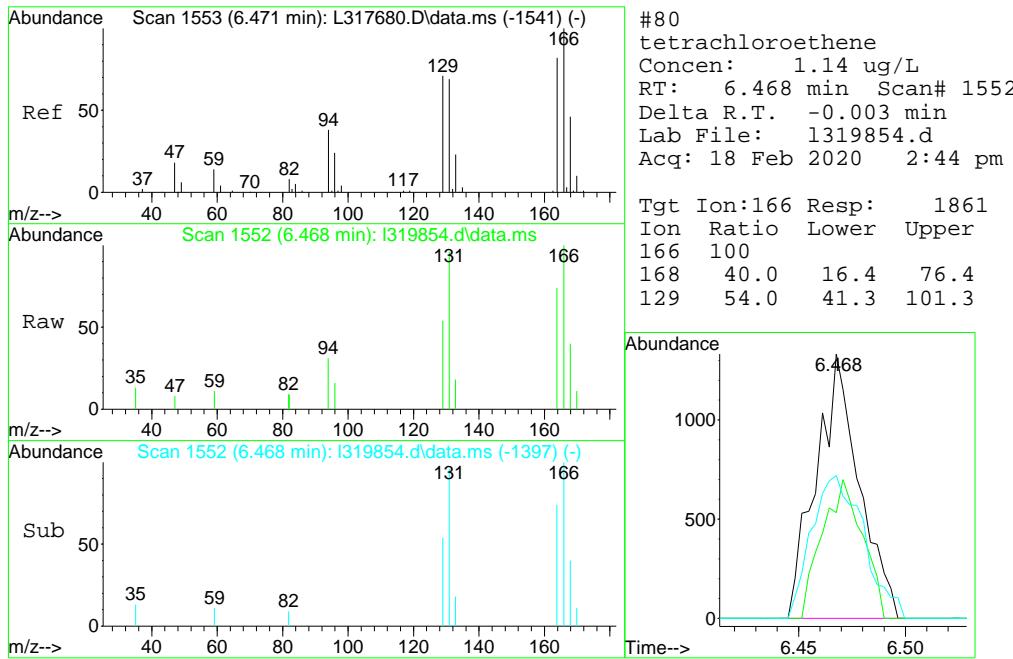
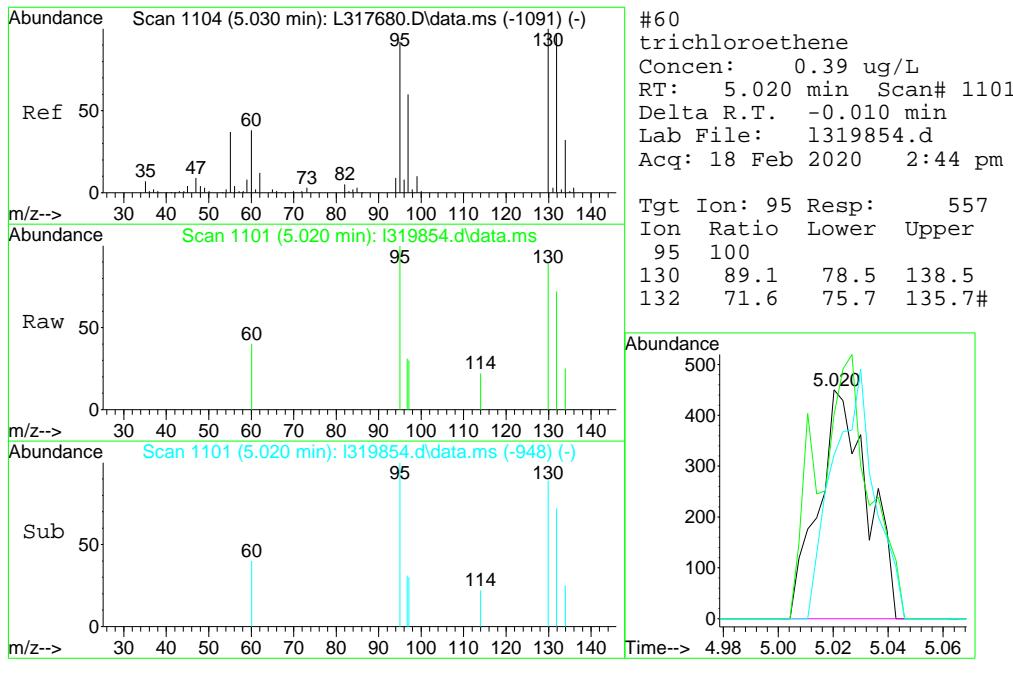
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319854.d
 Acq On : 18 Feb 2020 2:44 pm
 Operator : edwardd
 Sample : JD3305-7
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 19 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:29:42 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319855.d
 Acq On : 18 Feb 2020 3:11 pm
 Operator : edwardd
 Sample : JD3305-8 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:30:32 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:43:48 2019

Response via : Initial Calibration

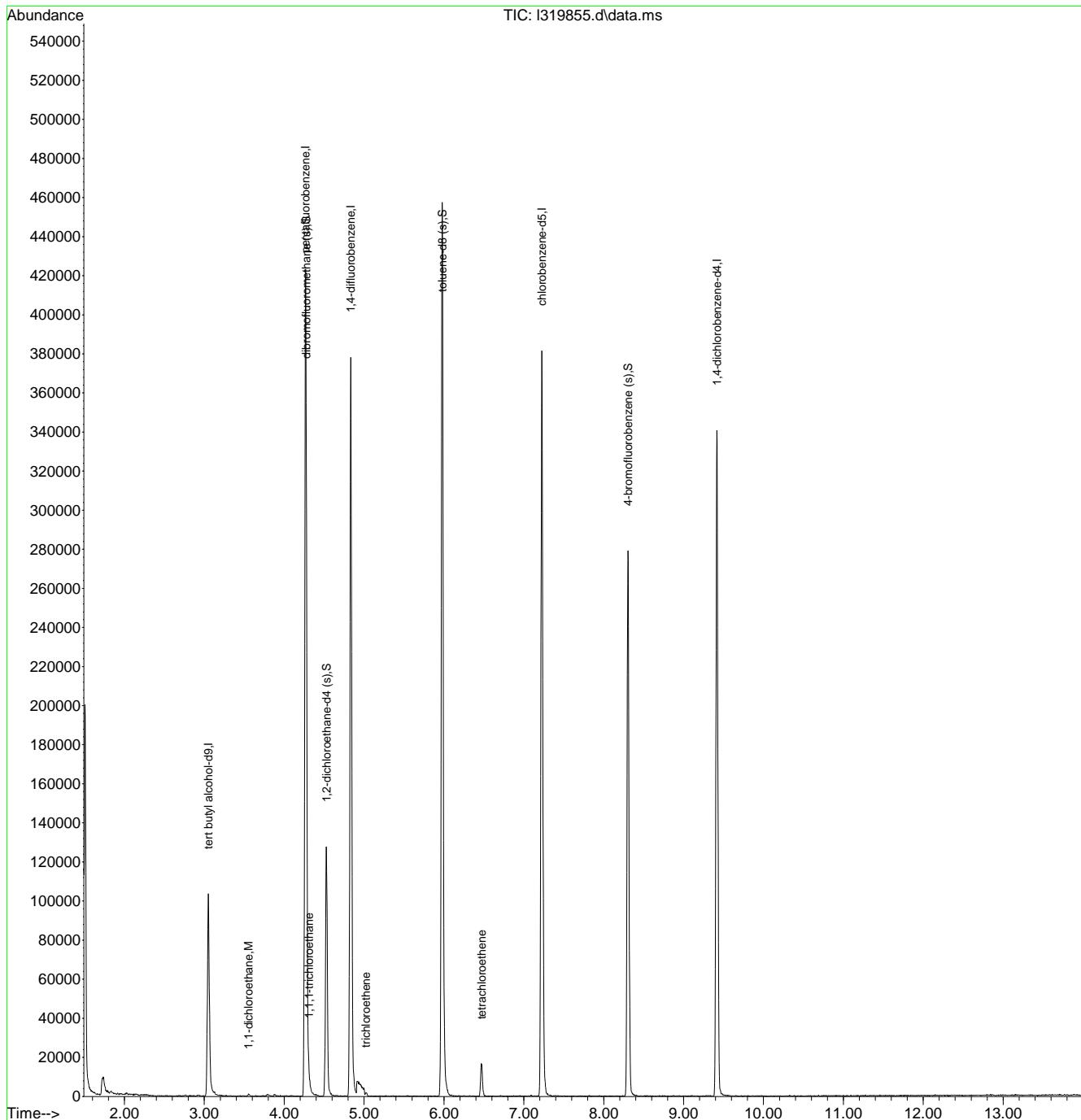
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	109542	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	209754	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	278659	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	226807	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	103466	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	75663	46.17	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	92.34%		
53) 1,2-dichloroethane-d4 (s)	4.529	65	70042	43.89	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	87.78%		
74) toluene-d8 (s)	5.980	98	297885	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.36%		
97) 4-bromofluorobenzene (s)	8.303	95	94917	47.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	94.64%		
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.554	63	742	0.27	ug/L	# 37
46) 1,1,1-trichloroethane	4.308	97	1270	0.56	ug/L	# 34
60) trichloroethene	5.023	95	648	0.45	ug/L	# 82
80) tetrachloroethene	6.471	166	5528	3.35	ug/L	94

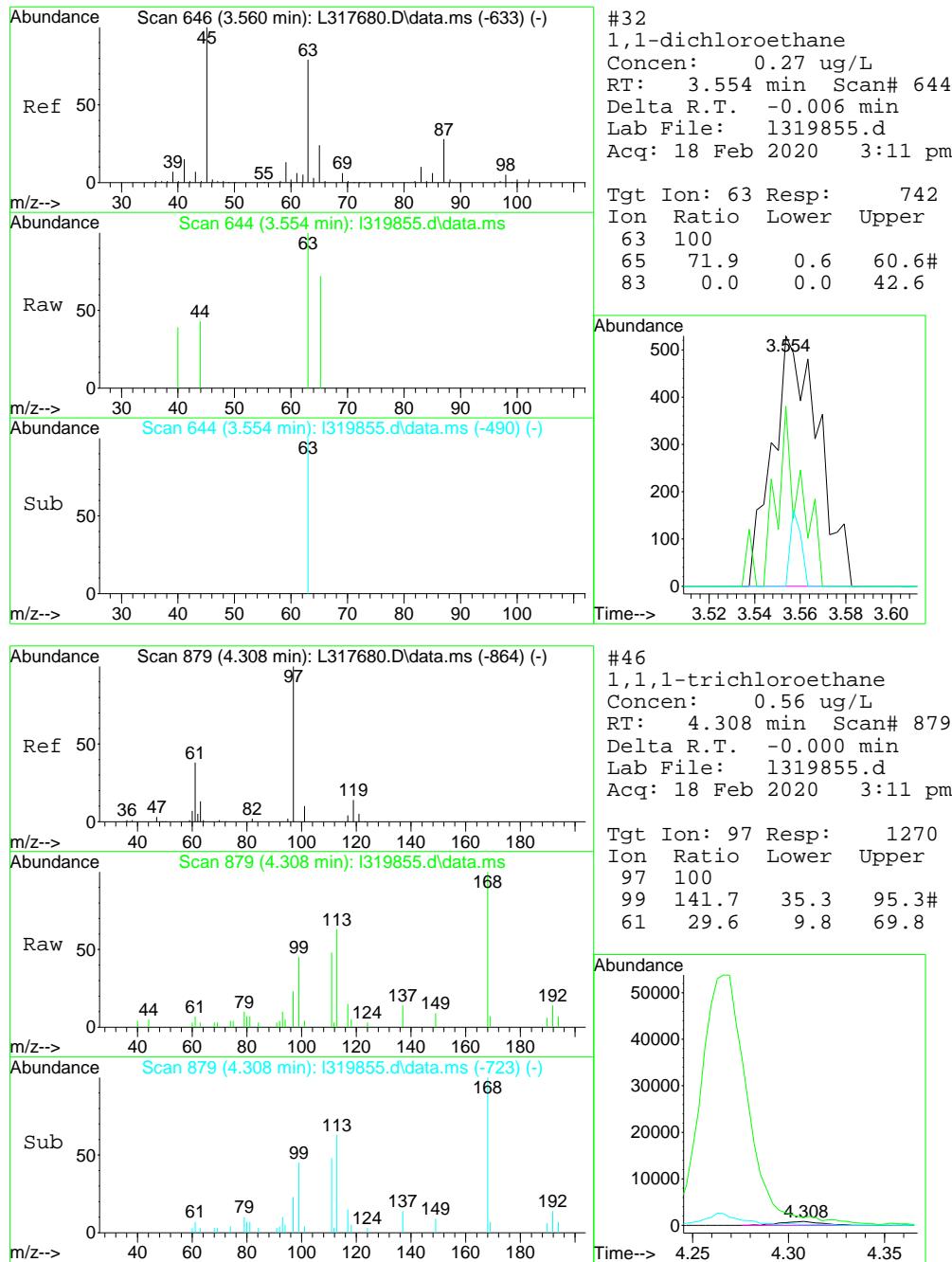
(#) = qualifier out of range (m) = manual integration (+) = signals summed

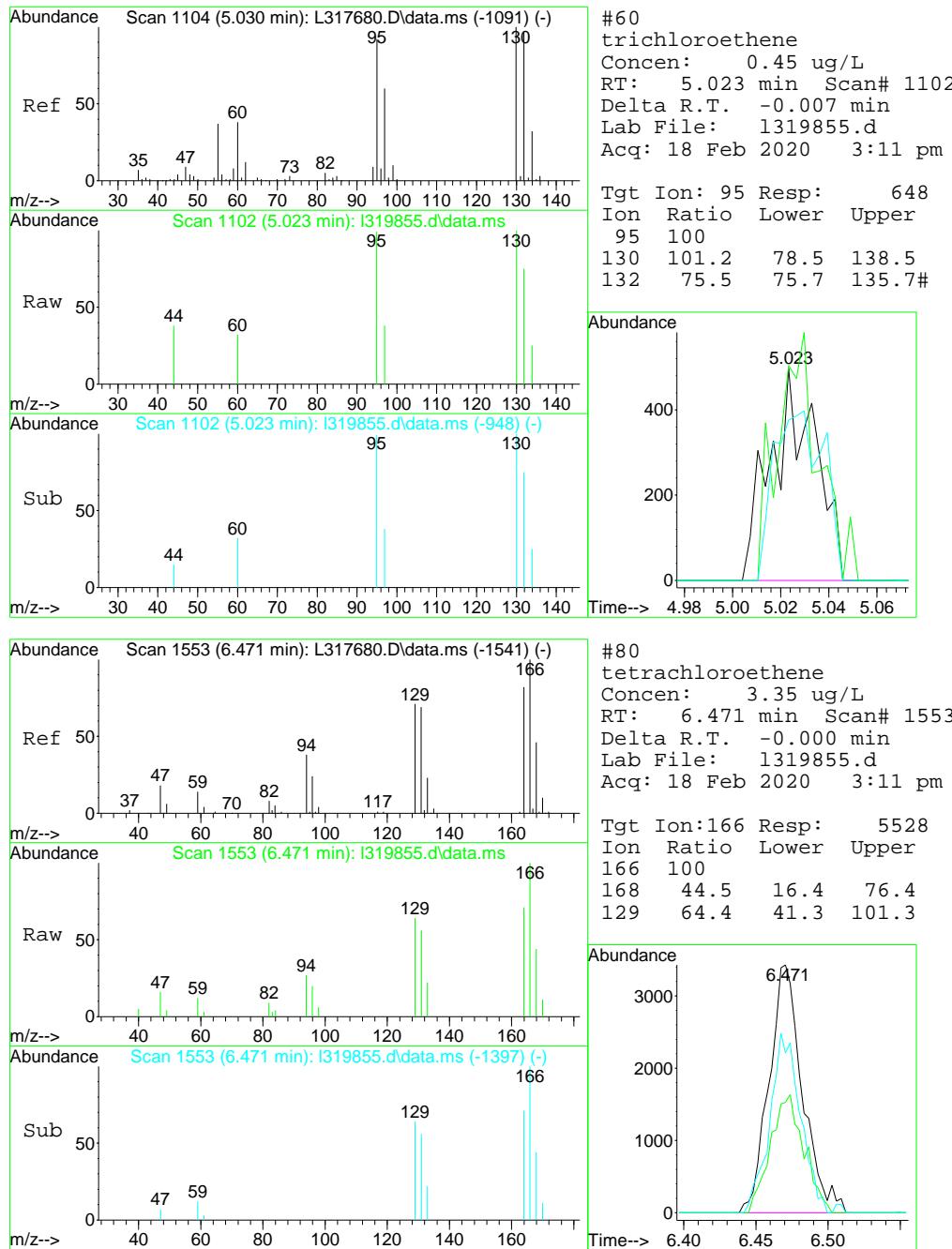
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319855.d
 Acq On : 18 Feb 2020 3:11 pm
 Operator : edwardd
 Sample : JD3305-8
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 20 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:30:32 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319856.d
 Acq On : 18 Feb 2020 3:38 pm
 Operator : edwardd
 Sample : JD3305-9 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:31:31 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

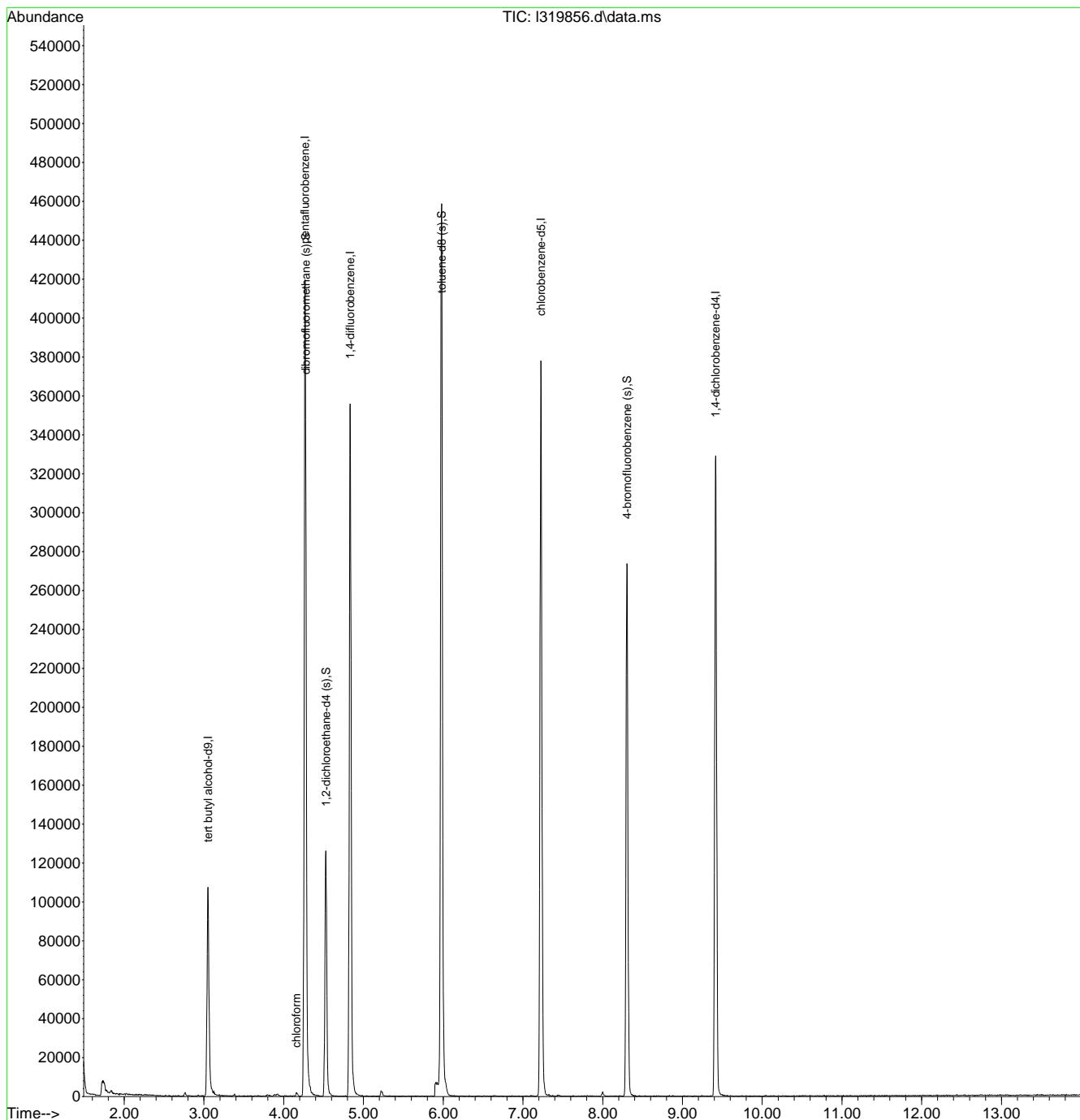
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	115227	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	207025	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	272954	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	223025	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	102484	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	75362	46.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.20%		
53) 1,2-dichloroethane-d4 (s)	4.529	65	70589	45.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	90.30%		
74) toluene-d8 (s)	5.980	98	301882	52.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	104.46%		
97) 4-bromofluorobenzene (s)	8.303	95	92892	46.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.50%		
<hr/>						
Target Compounds						
43) chloroform	4.157	83	1194	0.45	ug/L	68
<hr/>						

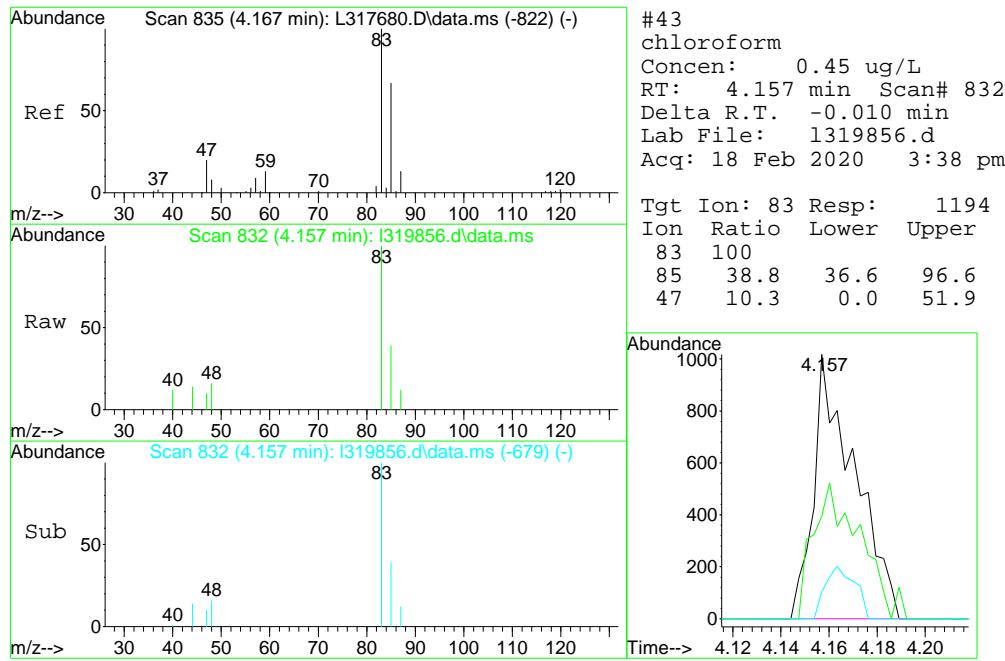
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319856.d
 Acq On : 18 Feb 2020 3:38 pm
 Operator : edwardd
 Sample : JD3305-9
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 21 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:31:31 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319841.d
 Acq On : 18 Feb 2020 8:53 am
 Operator : edwardd
 Sample : JD3305-10 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:10:33 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

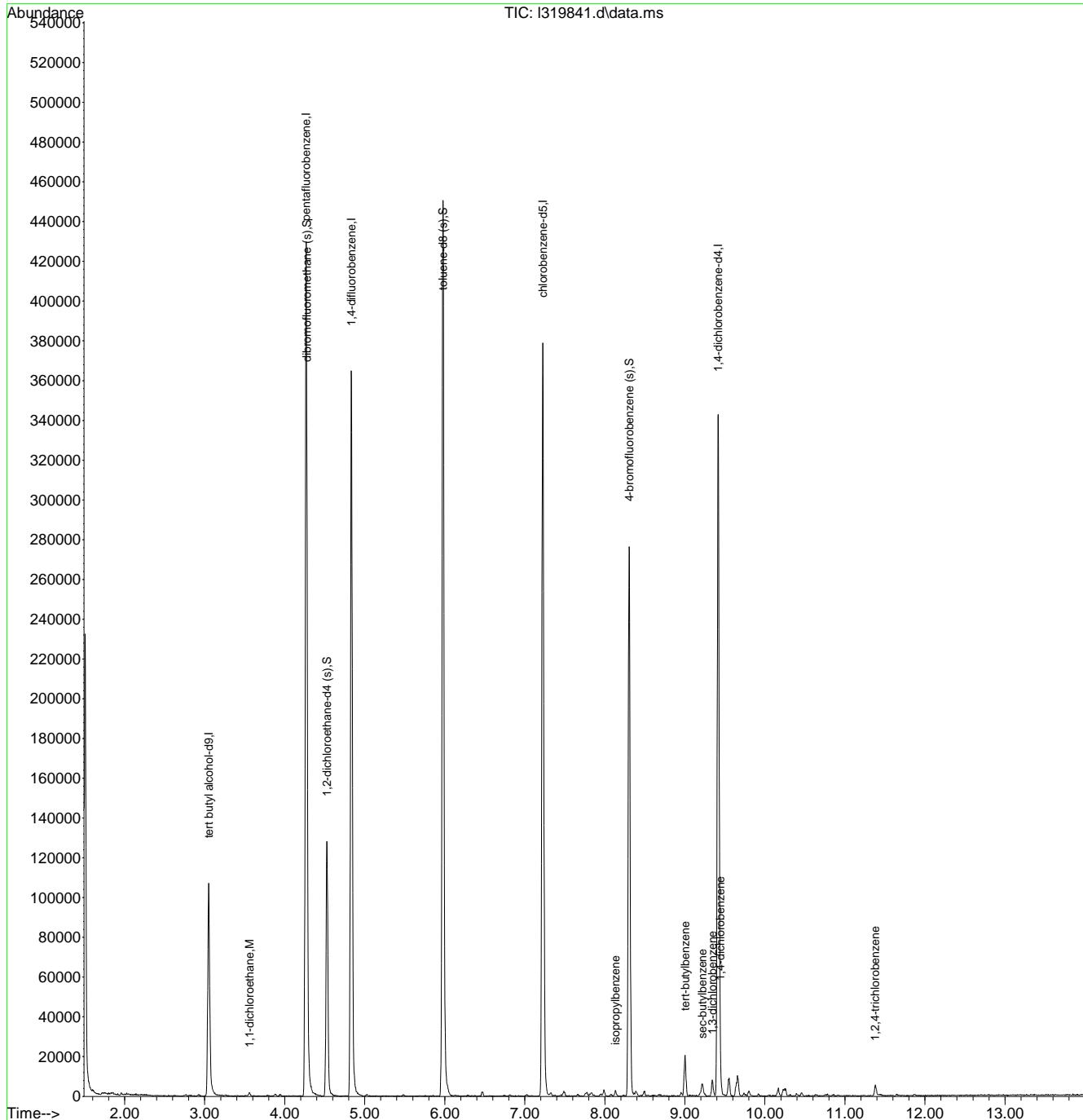
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	112609	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	210063	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	277781	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	227092	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	102111	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	76592	46.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.34%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	71327	44.83	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	89.66%		
74) toluene-d8 (s)	5.977	98	292469	49.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.38%		
97) 4-bromofluorobenzene (s)	8.303	95	94437	47.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	95.40%		
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.557	63	1541	0.57	ug/L	88
94) isopropylbenzene	8.130	105	2236	0.36	ug/L	99
106) tert-butylbenzene	9.003	119	10929	2.54	ug/L	97
108) sec-butylbenzene	9.218	105	5041	0.88	ug/L	92
109) 1,3-dichlorobenzene	9.343	146	4100	1.51	ug/L	92
111) 1,4-dichlorobenzene	9.442	146	4862	1.83	ug/L	95
116) 1,2,4-trichlorobenzene	11.377	180	2601	1.53	ug/L	92

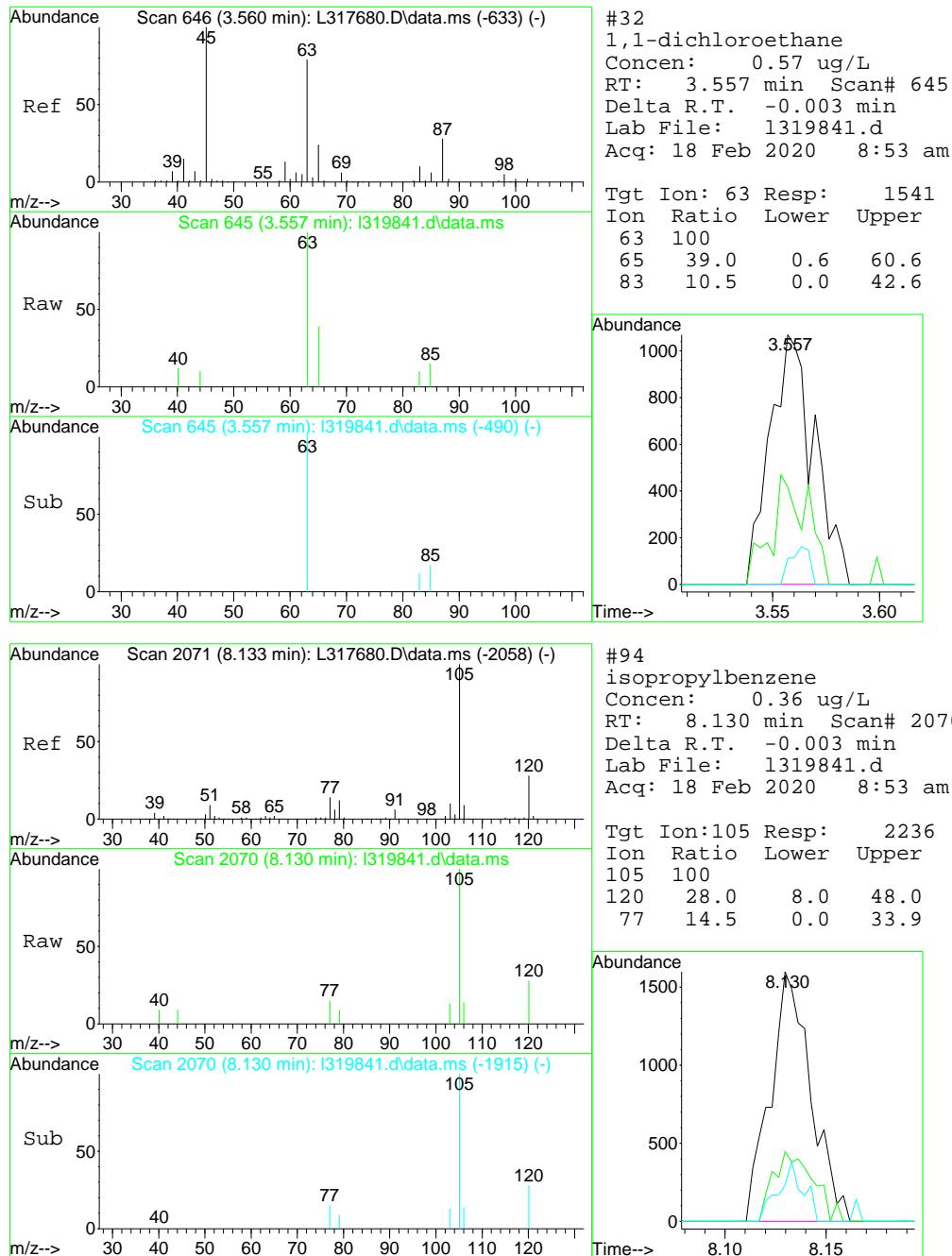
(#) = qualifier out of range (m) = manual integration (+) = signals summed

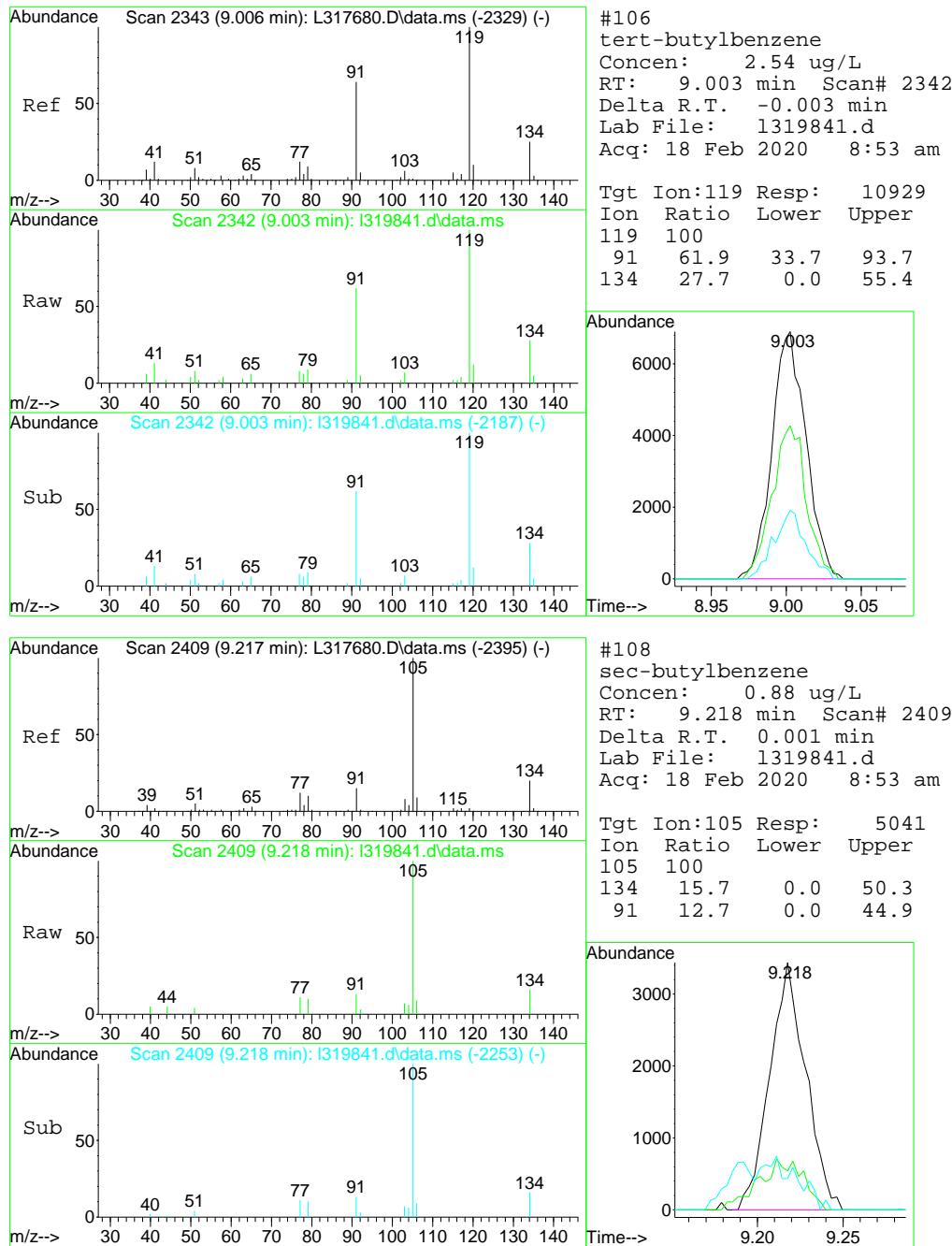
Quantitation Report (QT Reviewed)

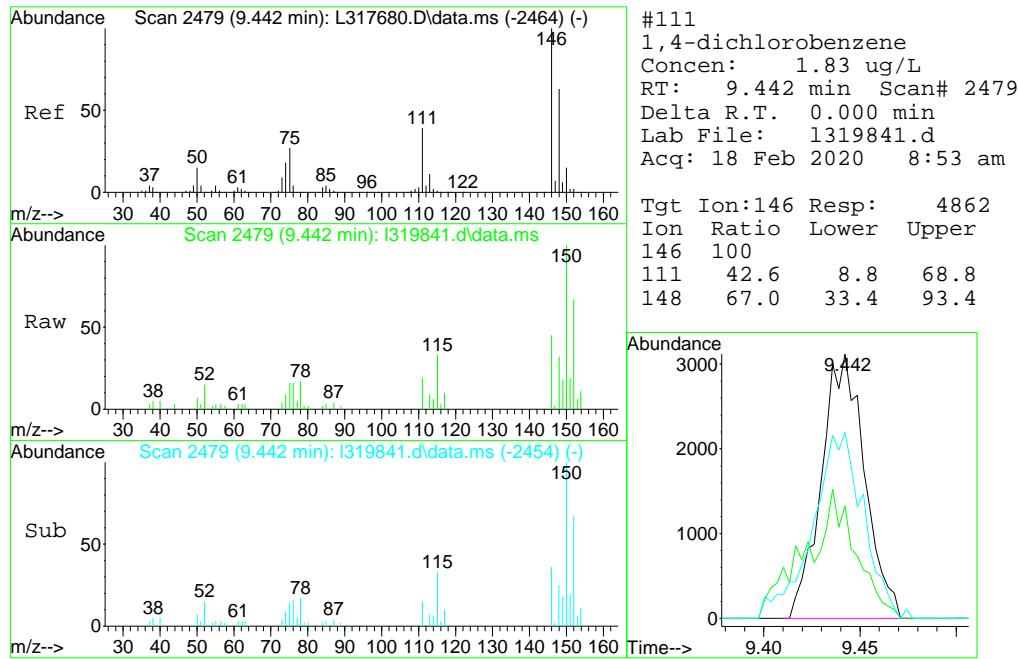
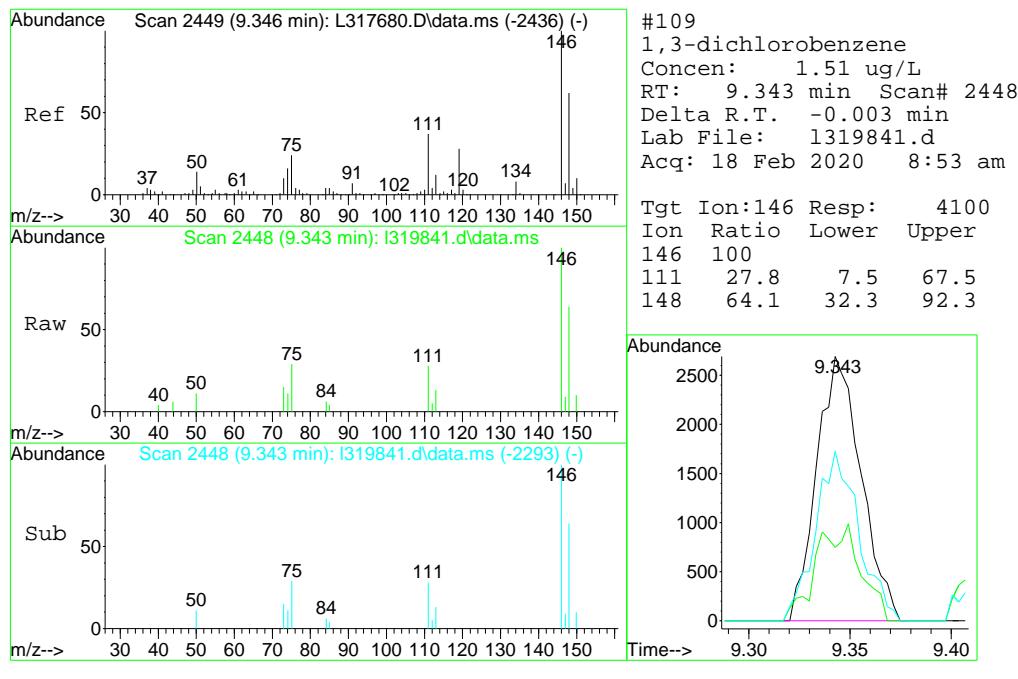
Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319841.d
 Acq On : 18 Feb 2020 8:53 am
 Operator : edwardd
 Sample : JD3305-10
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 6 Sample Multiplier: 1
 Inst : GCMSL

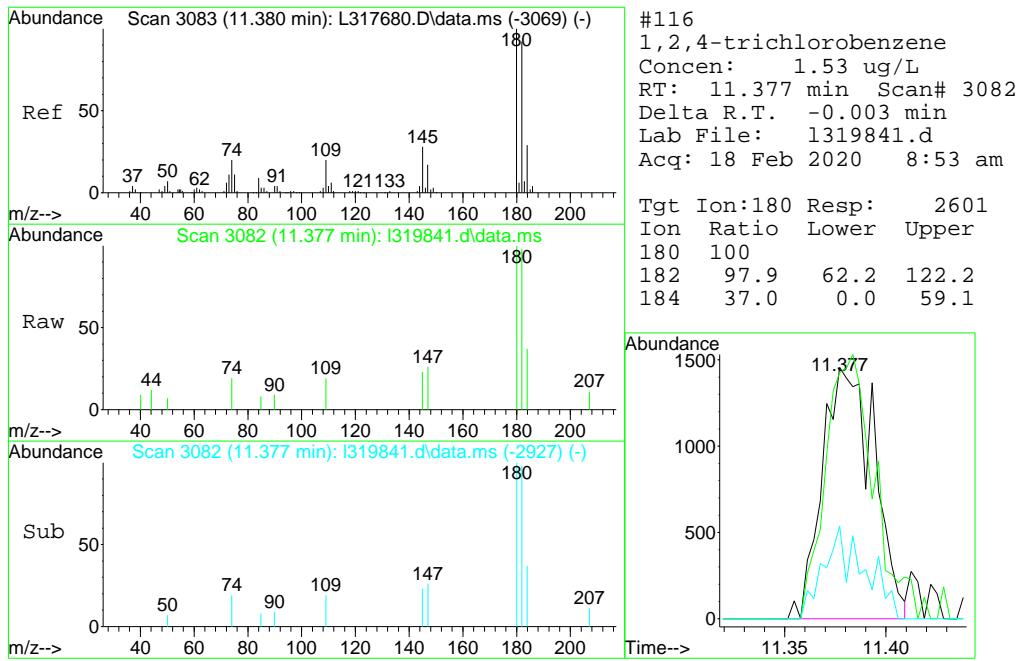
Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:10:33 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration











Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319857.d
 Acq On : 18 Feb 2020 4:05 pm
 Operator : edwardd
 Sample : JD3305-11 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:57:16 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

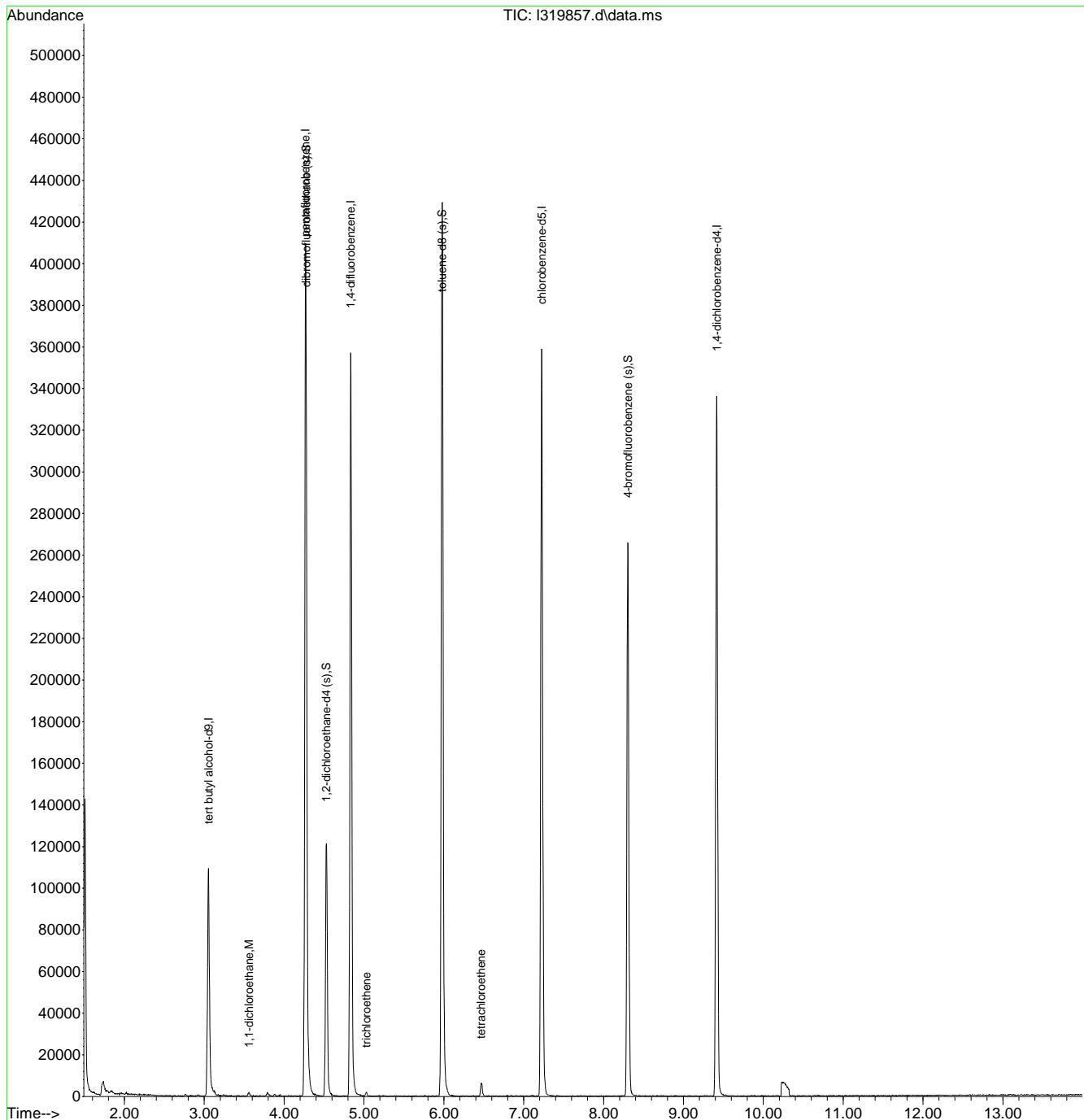
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	114901	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	205666	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	269828	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	215823	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	99298	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	71623	44.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	89.16%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	69269	44.82	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	89.64%	
74) toluene-d8 (s)	5.977	98	285731	51.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.16%	
97) 4-bromofluorobenzene (s)	8.303	95	91456	47.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	95.02%	
<hr/>						
Target Compounds						
32) 1,1-dichloroethane	3.557	63	1458	0.55	ug/L	88
60) trichloroethene	5.027	95	631	0.45	ug/L #	68
80) tetrachloroethene	6.468	166	2054	1.31	ug/L	89

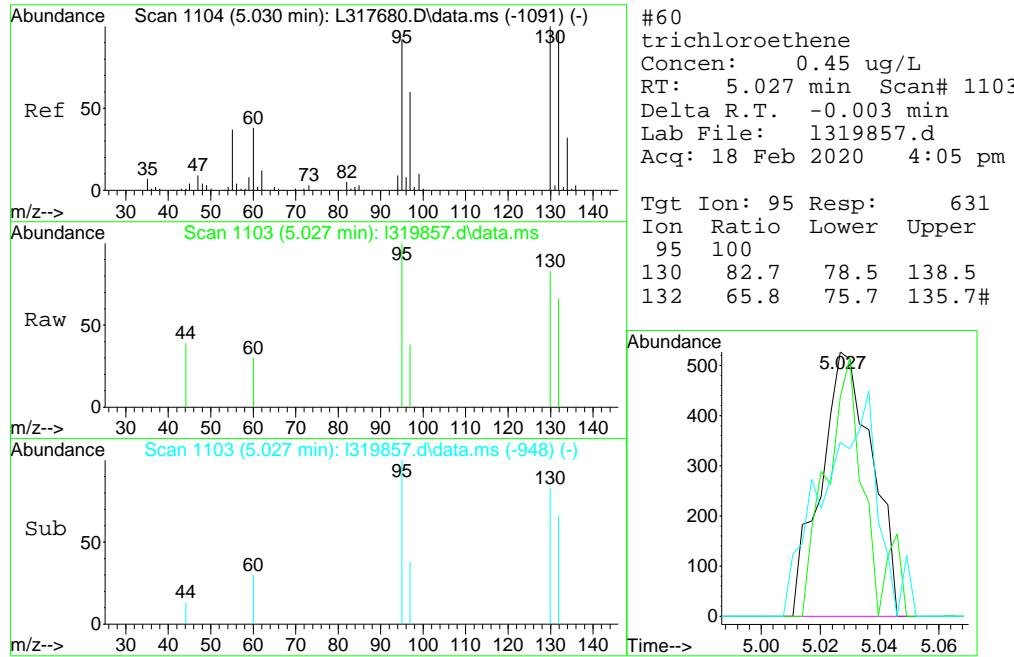
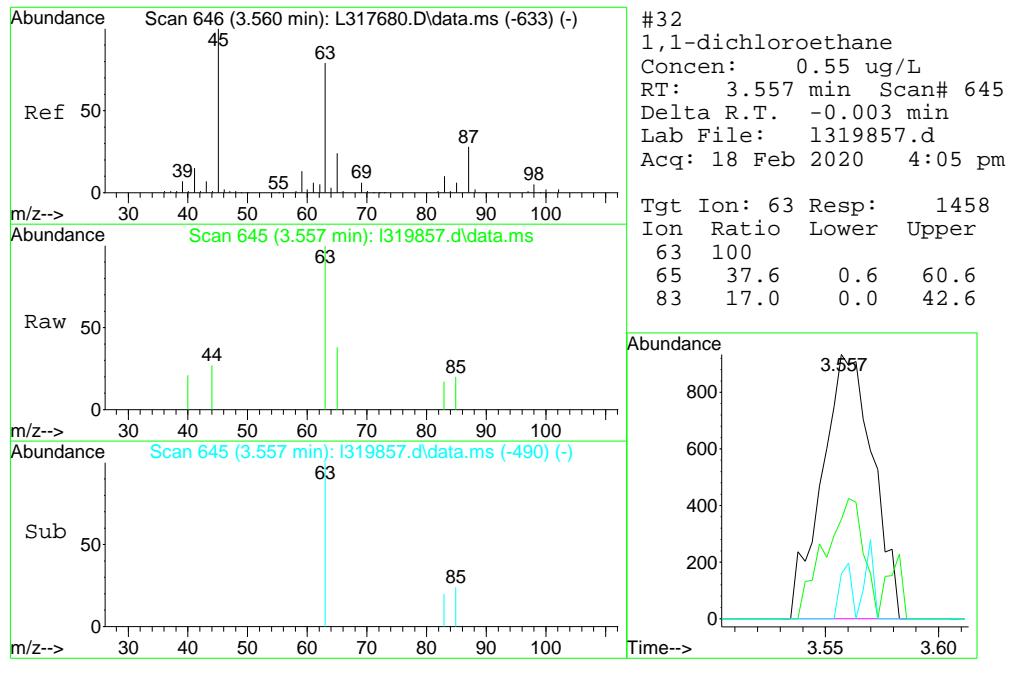
(#) = qualifier out of range (m) = manual integration (+) = signals summed

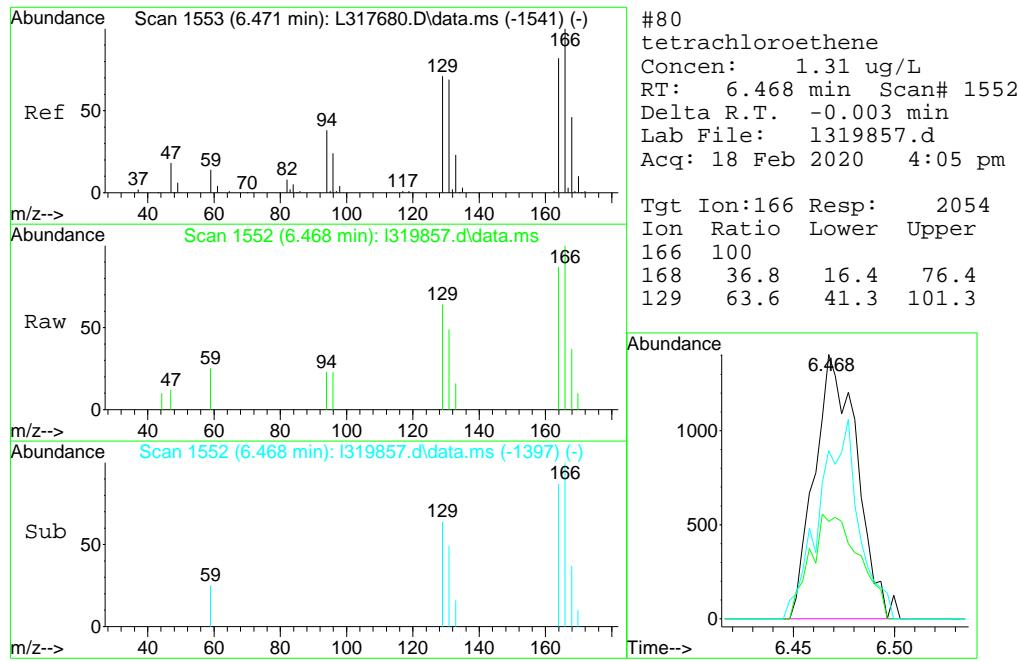
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319857.d
 Acq On : 18 Feb 2020 4:05 pm
 Operator : edwardd
 Sample : JD3305-11
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 22 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:57:16 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319848.d
 Acq On : 18 Feb 2020 12:02 pm
 Operator : edwardd
 Sample : JD3305-12 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:22:57 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration

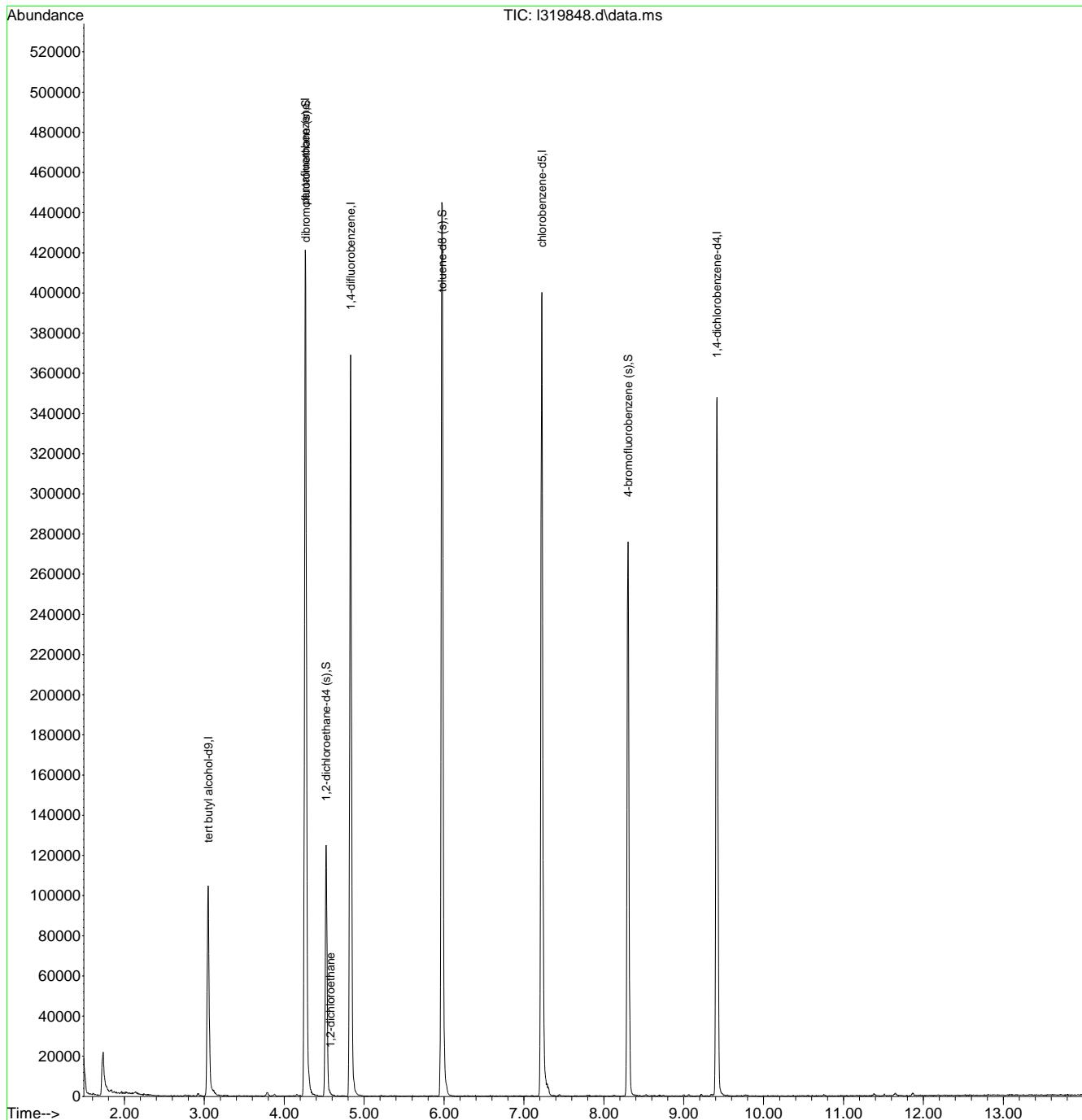
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	113412	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	208510	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	274918	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	229781	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	103022	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.269	113	75901	46.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.20%		
53) 1,2-dichloroethane-d4 (s)	4.523	65	70799	44.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	89.92%		
74) toluene-d8 (s)	5.976	98	291469	48.94	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	97.88%		
97) 4-bromofluorobenzene (s)	8.303	95	94114	47.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	94.24%		
<hr/>						
Target Compounds						
59) 1,2-dichloroethane	4.577	62	404	0.22	ug/L	90
<hr/>						

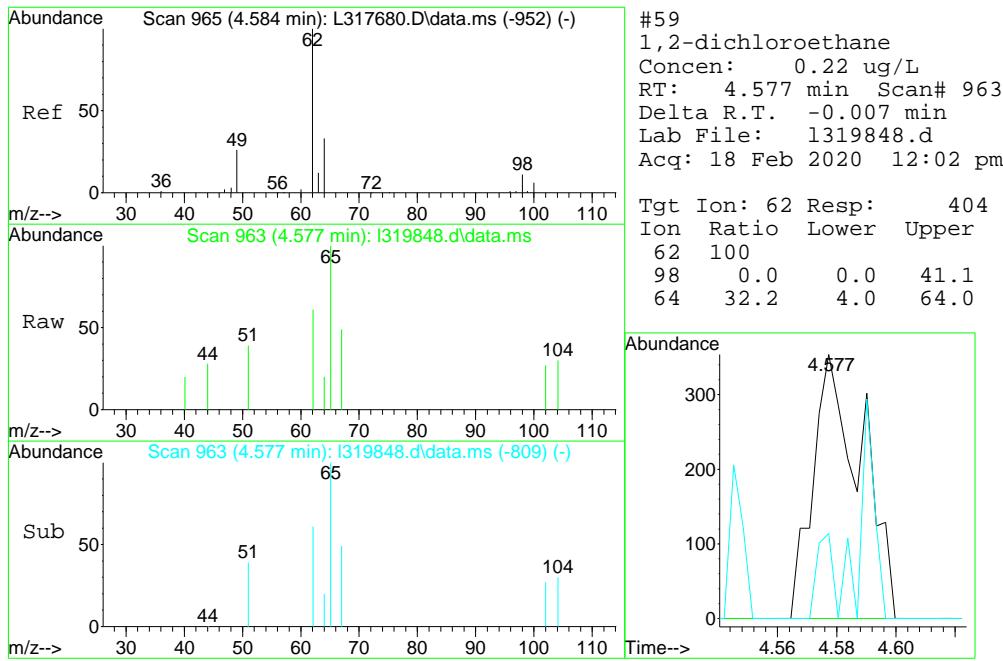
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319848.d
 Acq On : 18 Feb 2020 12:02 pm
 Operator : edwardd
 Sample : JD3305-12 Inst : GCMSL
 Misc : MS41192,VL9424,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:22:57 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:43:48 2019
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319840.d
 Acq On : 18 Feb 2020 8:21 am
 Operator : edwardd
 Sample : mb Inst : GCMSL
 Misc : MS37677,VL9424,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:08:51 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	112604	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	210477	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	274972	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	221377	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	100769	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	74902	45.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	91.10%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	71048	45.11	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	90.22%		
74) toluene-d8 (s)	5.977	98	290840	50.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.38%		
97) 4-bromofluorobenzene (s)	8.303	95	91757	46.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.94%		
<hr/>						
Target Compounds						
23) carbon disulfide	2.915	76	760	0.20	ug/L	78
111) 1,4-dichlorobenzene	9.439	146	391	0.15	ug/L	77
118) naphthalene	11.644	128	1424	0.31	ug/L	68
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

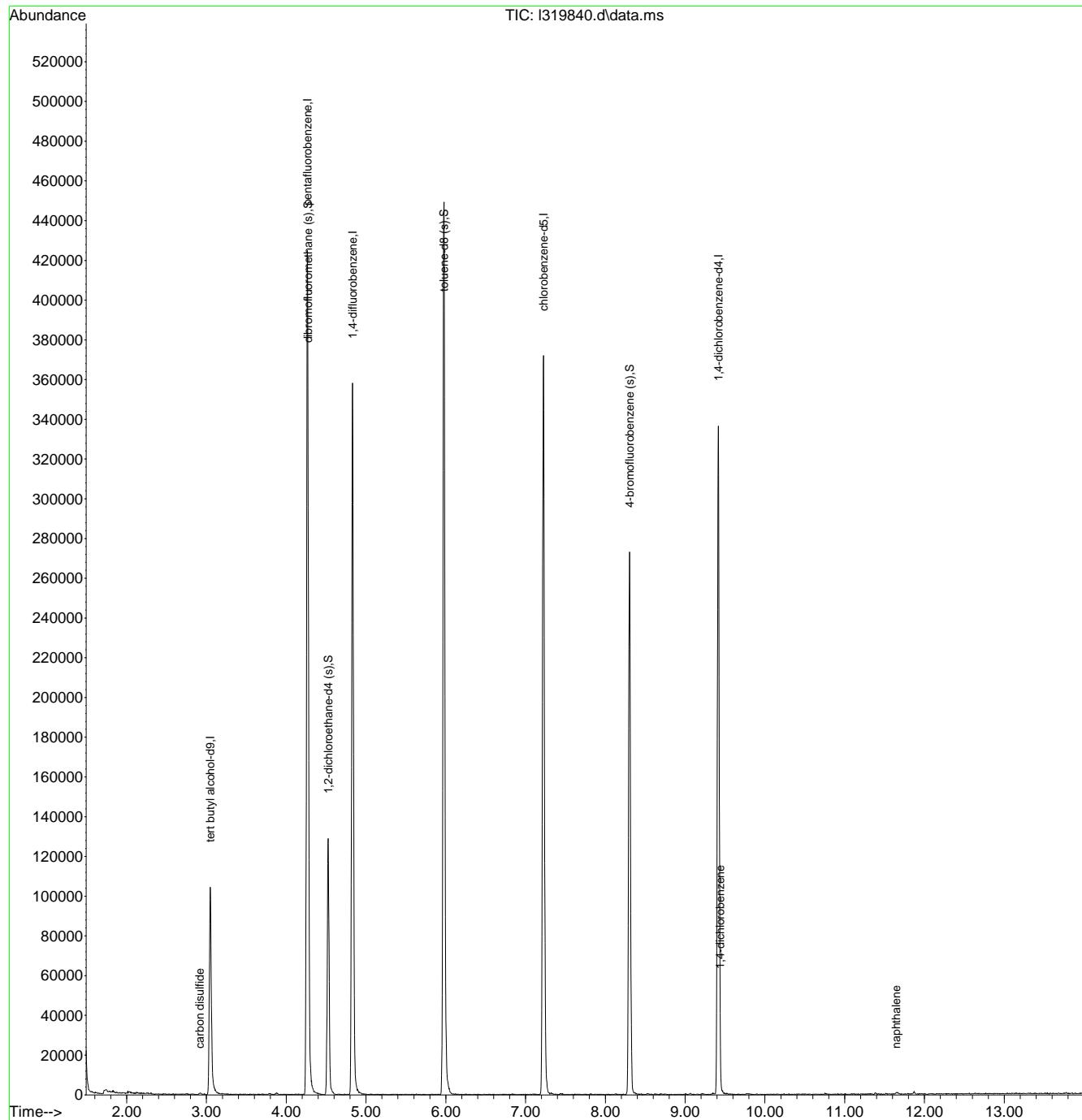
7.2.1

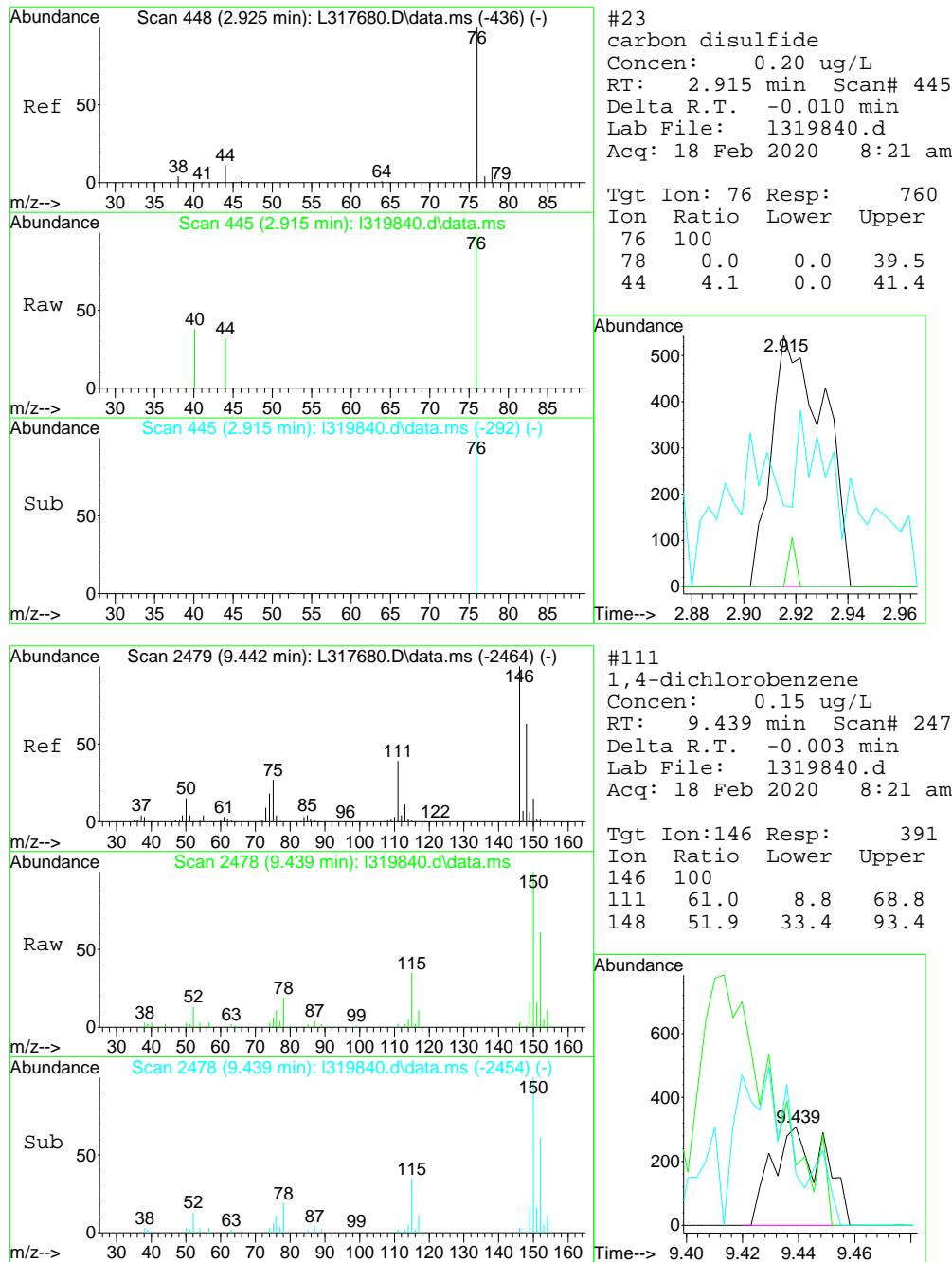
7

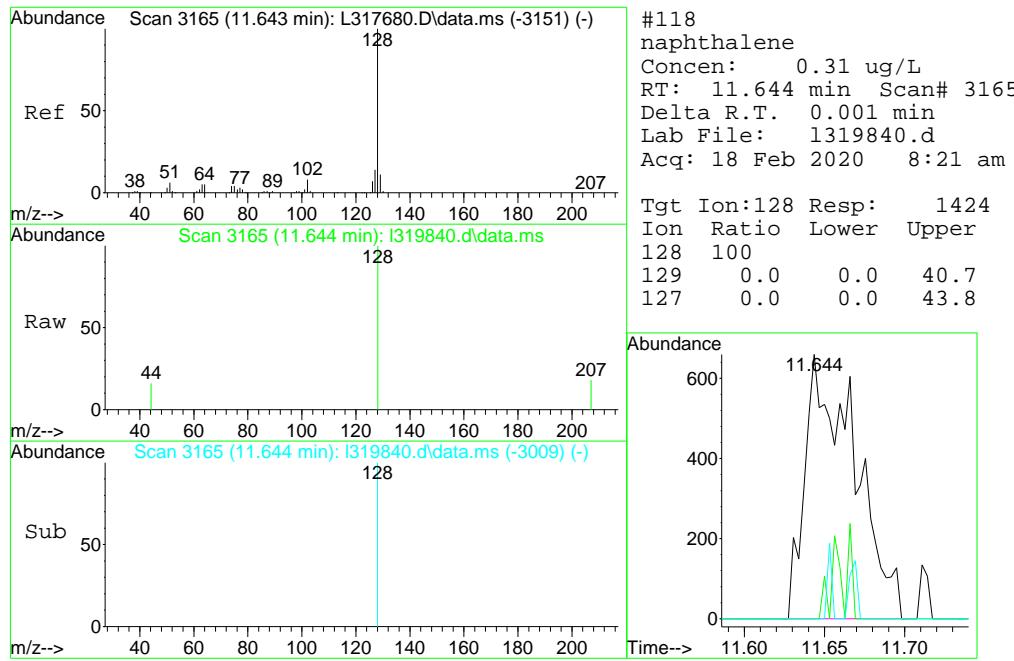
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319840.d
 Acq On : 18 Feb 2020 8:21 am
 Operator : edwardd
 Sample : mb
 Misc : MS37677,VL9424,5,,,1
 ALS Vial : 5 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:08:51 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200806.d
 Acq On : 19 Feb 2020 8:45 am
 Operator : edwardd
 Sample : mb Inst : Instrument #1
 Misc : MS41142,V2A8686,w,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 20:47:20 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.296	65	83059	500.00	ug/L	0.00
5) pentafluorobenzene	9.560	168	304353	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.486	114	457251	50.00	ug/L	0.00
74) chlorobenzene-d5	13.608	117	403007	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	204496	50.00	ug/L	0.00

System Monitoring Compounds						
45) dibromofluoromethane (s)	9.592	113	140359	50.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.48%		
53) 1,2-dichloroethane-d4 (s)	10.010	65	151788	50.03	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	100.06%		
75) toluene-d8 (s)	12.113	98	503471	49.21	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.42%		
99) 4-bromofluorobenzene (s)	14.770	95	192669	49.97	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.94%		

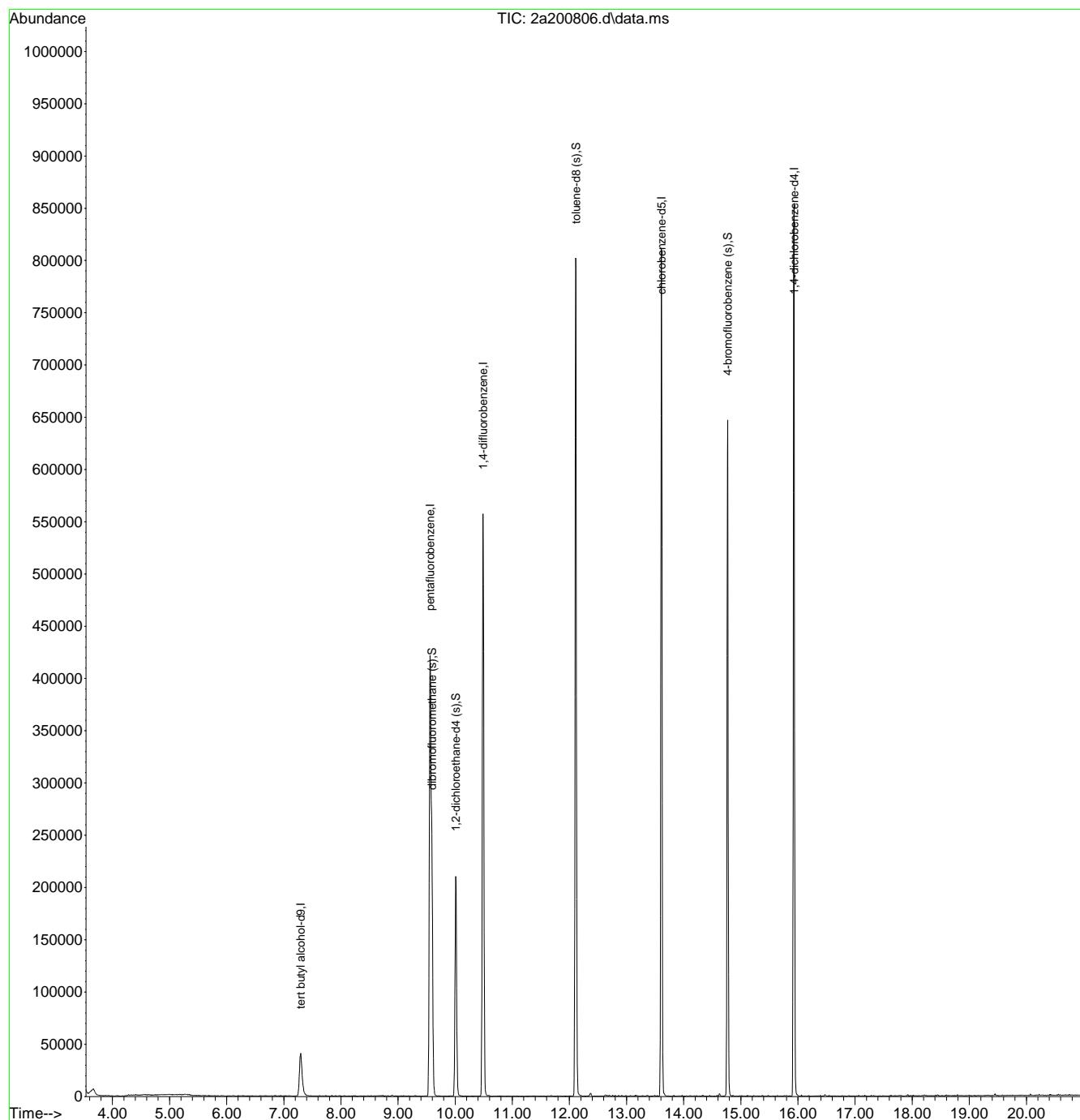
Target Compounds	Qvalue
<hr/>	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200806.d
 Acq On : 19 Feb 2020 8:45 am
 Operator : edwardd
 Sample : mb
 Misc : MS41142,V2A8686,w,,,1
 ALS Vial : 5 Sample Multiplier: 1
 Inst : Instrument #1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 20:47:20 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319838.d
 Acq On : 18 Feb 2020 7:27 am
 Operator : edwardd
 Sample : bs Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 08:01:19 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	97058	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	170068	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	232405	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	202334	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	87426	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.279	113	61866	46.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.12%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	61888	46.49	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	92.98%	
74) toluene-d8 (s)	5.977	98	244992	46.72	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.44%	
97) 4-bromofluorobenzene (s)	8.303	95	82132	48.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.92%	
Target Compounds						
2) 1,4-dioxane	5.264	88	25977	1334.50	ug/L	88
3) ethanol	2.479	45	120136	5504.97	ug/L	99
4) tertiary butyl alcohol	3.108	59	58175	265.25	ug/L	93
6) chlorodifluoromethane	1.648	51	77608	48.09	ug/L	93
7) dichlorodifluoromethane	1.635	85	102416	47.67	ug/L	97
8) chloromethane	1.786	50	89631	52.18	ug/L	97
9) vinyl chloride	1.876	62	107786	56.43	ug/L	98
10) bromomethane	2.123	94	26777	60.30	ug/L	95
11) chloroethane	2.206	64	50544	57.87	ug/L	97
12) vinyl bromide	2.344	106	55826	53.57	ug/L	94
13) trichlorofluoromethane	2.389	101	105847	53.67	ug/L	96
14) ethyl ether	2.569	74	42993	55.50	ug/L	92
15) 2-chloropropane	2.662	43	107700	49.88	ug/L	97
16) acrolein	2.671	56	17861	51.49	ug/L	88
17) freon 113	2.745	151	58082	62.14	ug/L	95
18) 1,1-dichloroethene	2.752	96	61982	52.22	ug/L	85
19) acetone	2.761	58	31772	185.95	ug/L	94
20) acetonitrile	2.954	40	60453	457.42	ug/L	97
21) iodomethane	2.864	142	19490	66.07	ug/L	94
22) iso-butyl alcohol	4.414	43	39466	421.65	ug/L	96
23) carbon disulfide	2.922	76	146404	47.42	ug/L	97
24) methylene chloride	3.079	84	64723	54.42	ug/L	97
25) methyl acetate	2.967	74	16052	51.91	ug/L	91
26) methyl tert butyl ether	3.246	73	199150	50.49	ug/L	98
27) trans-1,2-dichloroethene	3.262	96	67162	53.63	ug/L	94
28) hexane	3.438	57	97902	58.04	ug/L	94
29) di-isopropyl ether	3.551	45	217901	51.86	ug/L	94
30) ethyl tert-butyl ether	3.795	59	208387	51.95	ug/L	98
31) 2-butanone	3.916	72	43917	194.00	ug/L	95
32) 1,1-dichloroethane	3.557	63	113219	51.36	ug/L	95
33) chloroprene	3.608	53	95001	52.41	ug/L	97
34) acrylonitrile	3.227	53	33155	50.55	ug/L	92
35) vinyl acetate	3.531	86	18416	54.67	ug/L	# 87
36) ethyl acetate	3.923	45	15008	51.62	ug/L	# 64
37) 2,2-dichloropropane	3.955	77	91595	49.75	ug/L	98
38) cis-1,2-dichloroethene	3.942	96	72467	53.29	ug/L	96
39) propionitrile	3.961	54	107315	399.76	ug/L	99
40) methyl acrylate	3.968	85	13305	49.67	ug/L	# 82
41) bromochloromethane	4.112	128	35710	53.29	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319838.d
 Acq On : 18 Feb 2020 7:27 am
 Operator : edwardd
 Sample : bs Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 08:01:19 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) tetrahydrofuran	4.122	72	11695	44.53	ug/L	97
43) chloroform	4.164	83	109423	50.09	ug/L	99
45) methacrylonitrile	4.071	67	33713	48.02	ug/L	96
46) 1,1,1-trichloroethane	4.308	97	92478	49.98	ug/L	99
47) cyclohexane	4.366	84	89003	49.44	ug/L	92
48) 1,1-dichloropropene	4.414	75	84517	51.23	ug/L	96
49) carbon tetrachloride	4.417	117	77328	50.21	ug/L	98
50) isopropyl acetate	4.529	87	19048	49.61	ug/L	98
51) tert amyl alcohol	4.504	55	17907	216.29	ug/L #	87
54) tert-amyl methyl ether	4.619	73	192511	51.64	ug/L	98
55) 2,2,4-trimethylpentane	4.619	57	173962	55.86	ug/L	99
56) n-butyl alcohol	4.892	56	145323	2357.69	ug/L	98
57) benzene	4.558	78	251980	54.65	ug/L	98
58) heptane	4.728	57	43453	59.68	ug/L	87
59) 1,2-dichloroethane	4.581	62	70722	45.75	ug/L	97
60) trichloroethylene	5.027	95	65645	54.32	ug/L	99
61) ethyl acrylate	5.046	55	106622	51.38	ug/L	99
62) 2-nitropropane	5.575	41	19511	50.63	ug/L	88
63) 2-chloroethyl vinyl ether	5.608	63	40792	917.30	ug/L	95
64) methyl methacrylate	5.223	100	23412	53.68	ug/L #	86
65) 1,2-dichloropropane	5.226	63	65712	55.55	ug/L	91
66) methylcyclohexane	5.216	83	110026	59.85	ug/L	98
67) dibromomethane	5.296	93	38394	52.27	ug/L	92
68) bromodichloromethane	5.415	83	85090	55.57	ug/L	98
69) cis-1,3-dichloropropene	5.752	75	111817	54.76	ug/L	97
70) epichlorohydrin	5.659	57	32607	220.31	ug/L	96
71) 4-methyl-2-pentanone	5.848	58	137394	201.14	ug/L	98
72) 3-methyl-1-butanol	5.871	70	54739	941.80	ug/L	96
75) toluene	6.034	92	165066	54.29	ug/L	100
76) trans-1,3-dichloropropene	6.204	75	95056	51.59	ug/L	99
77) ethyl methacrylate	6.224	69	97435	51.42	ug/L	99
78) 1,1,2-trichloroethane	6.375	83	52693	53.79	ug/L	97
79) 2-hexanone	6.538	58	133128	187.32	ug/L	96
80) tetrachloroethene	6.471	166	82464	56.01	ug/L	93
81) 1,3-dichloropropane	6.522	76	98601	50.51	ug/L	97
82) butyl acetate	6.622	56	55515	50.33	ug/L	99
83) dibromochloromethane	6.711	129	67530	52.18	ug/L	98
84) 1,2-dibromoethane	6.827	107	73512	50.67	ug/L	95
85) n-butyl ether	7.295	57	273852	55.61	ug/L	98
86) chlorobenzene	7.254	112	178373	53.78	ug/L	96
87) 1,1,1,2-tetrachloroethane	7.324	131	60644	53.42	ug/L	98
88) ethylbenzene	7.324	91	284166	51.77	ug/L	97
89) m,p-xylene	7.440	106	228158	103.62	ug/L	95
90) o-xylene	7.796	106	112687	52.92	ug/L	98
91) butyl acrylate	7.716	55	145213	50.22	ug/L	99
92) styrene	7.812	104	188262	53.40	ug/L	97
93) bromoform	7.992	173	49887	54.35	ug/L	97
94) isopropylbenzene	8.133	105	285289	51.98	ug/L	99
95) cis-1,4-dichloro-2-butene	8.184	88	24517	47.86	ug/L	96
98) bromobenzene	8.447	156	76385	58.03	ug/L	93
99) 1,1,2,2-tetrachloroethane	8.415	83	87695	56.20	ug/L	99
100) trans-1,4-dichloro-2-b...	8.451	53	18412	47.67	ug/L	94
101) 1,2,3-trichloropropane	8.480	110	23896	49.89	ug/L	90
102) n-propylbenzene	8.524	91	309322	54.24	ug/L	99
103) 2-chlorotoluene	8.621	126	66228	54.57	ug/L	99
104) 4-chlorotoluene	8.736	126	64376	55.58	ug/L	89
105) 1,3,5-trimethylbenzene	8.695	105	214246	52.43	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319838.d
 Acq On : 18 Feb 2020 7:27 am
 Operator : edwardd
 Sample : bs Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 08:01:19 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) tert-butylbenzene	8.999	119	191696	52.03	ug/L	96
107) 1,2,4-trimethylbenzene	9.057	105	213464	51.85	ug/L	98
108) sec-butylbenzene	9.218	105	265521	54.27	ug/L	99
109) 1,3-dichlorobenzene	9.343	146	128510	55.45	ug/L	98
110) p-isopropyltoluene	9.362	119	221781	53.13	ug/L	98
111) 1,4-dichlorobenzene	9.439	146	124954	55.05	ug/L	95
112) 1,2-dichlorobenzene	9.792	146	118876	54.61	ug/L	96
113) n-butylbenzene	9.760	92	108393	56.90	ug/L	97
114) 1,2-dibromo-3-chloropr...	10.559	157	21672	48.56	ug/L	94
115) 1,3,5-trichlorobenzene	10.745	180	95177	56.99	ug/L	96
116) 1,2,4-trichlorobenzene	11.377	180	80650	55.50	ug/L	98
117) hexachlorobutadiene	11.515	225	34794	57.32	ug/L	97
118) naphthalene	11.640	128	198185	49.46	ug/L	98
119) 1,2,3-trichlorobenzene	11.862	180	67247	52.81	ug/L	97
120) hexachloroethane	10.062	119	37445	52.38	ug/L	93
121) benzyl chloride	9.548	91	149907	52.25	ug/L	99
122) 2-ethylhexyl acrylate	11.557	70	6449	6.96	ug/L #	78
123) 2-methylnaphthalene	12.770	142	31710	15.02	ug/L	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
Data File : 1319838.d
Acq On : 18 Feb 2020 7:27 am
Operator : edwardd
Sample : bs Inst : GCMSL
Misc : MS41177,VL9424,5,,,1
ALS Vial : 3 Sample Multiplier: 1

Inst : GCMSI

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

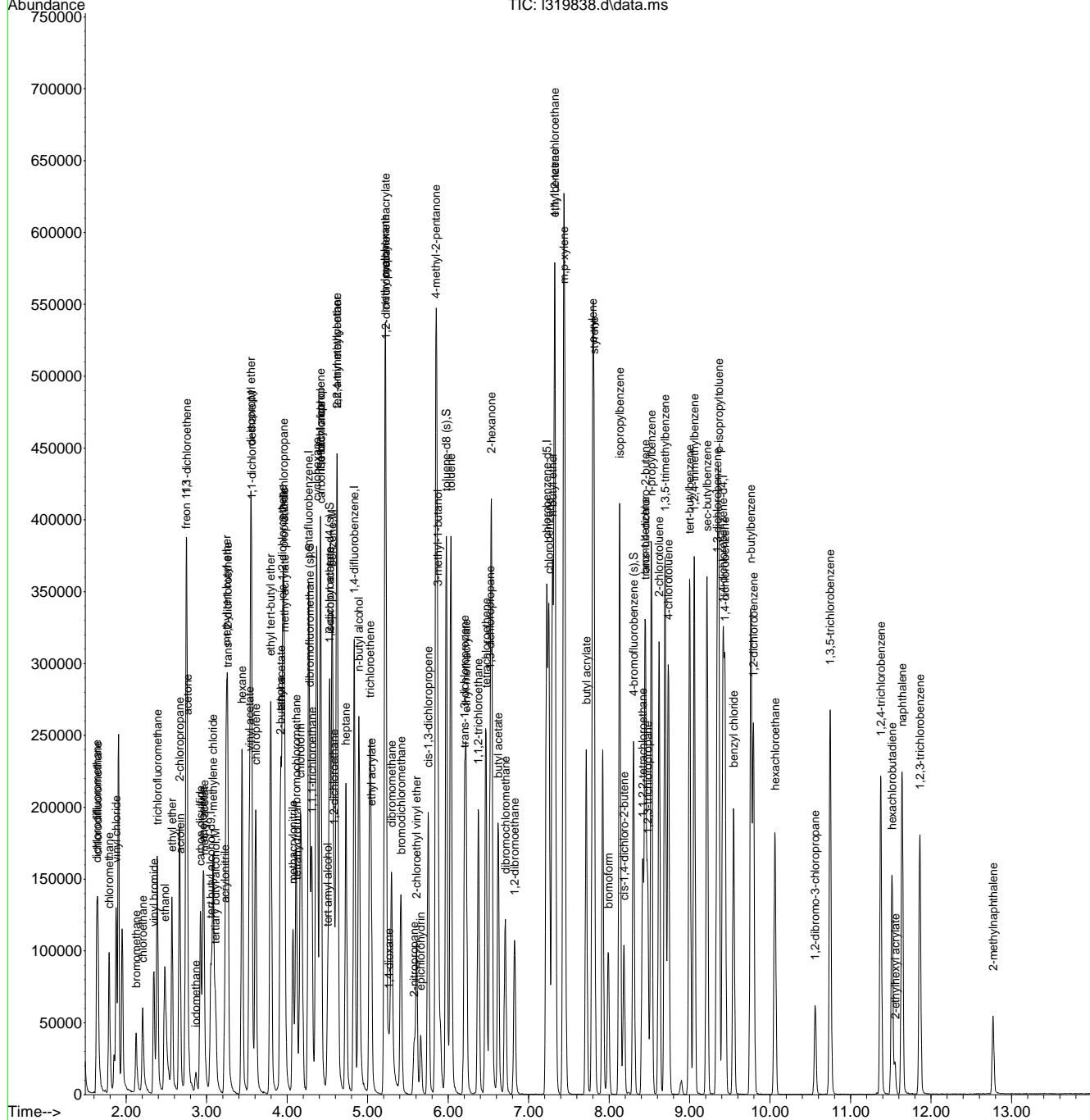
Quant Time: Feb 18 08:01:19 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:59:45 2019

Last update : Fri Nov 21 11:39:45 2019
Response via : Initial Calibration

Response via : initial calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200804.d
 Acq On : 19 Feb 2020 7:47 am
 Operator : edwardd
 Sample : bs Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 08:37:44 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.301	65	84791	500.00	ug/L	0.00
5) pentafluorobenzene	9.566	168	309218	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.491	114	472093	50.00	ug/L	0.00
74) chlorobenzene-d5	13.614	117	409806	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	214505	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.597	113	143800	51.16	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.32%	
53) 1,2-dichloroethane-d4 (s)	10.015	65	154842	49.43	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	98.86%	
75) toluene-d8 (s)	12.113	98	515406	49.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.10%	
99) 4-bromofluorobenzene (s)	14.770	95	200737	49.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.26%	
<hr/>						
Target Compounds						
2) ethanol	6.025	45	155399	6089.23	ug/L	100
3) tertiary butyl alcohol	7.421	59	62396	255.37	ug/L	95
4) 1,4-dioxane	11.135	88	34716	1494.37	ug/L	99
6) chlorodifluoromethane	4.053	51	192566	44.37	ug/L	99
7) dichlorodifluoromethane	4.016	85	242573	52.11	ug/L	99
8) chloromethane	4.393	50	256871	45.73	ug/L	98
9) vinyl chloride	4.623	62	267450	49.99	ug/L	99
10) 1,3-butadiene	4.665	54	142227	45.53	ug/L	96
11) bromomethane	5.240	94	163544	46.42	ug/L	97
12) chloroethane	5.402	64	136005	49.55	ug/L	98
13) vinyl bromide	5.737	106	150830	53.54	ug/L	100
14) trichlorofluoromethane	5.862	101	297749	53.38	ug/L	100
15) ethyl ether	6.234	74	89838	48.15	ug/L	96
16) 2-chloropropane	6.448	63	75928	51.18	ug/L	97
17) acrolein	6.464	56	25895	52.33	ug/L	95
18) freon 113	6.668	151	146566	56.26	ug/L	97
19) 1,1-dichloroethene	6.652	96	155020	51.41	ug/L	99
20) acetone	6.657	43	134951	186.06	ug/L	98
21) acetonitrile	7.076	41	179680	485.99	ug/L	97
22) iodomethane	6.903	142	230904	49.28	ug/L	99
23) carbon disulfide	7.039	76	415290	45.39	ug/L	98
24) methylene chloride	7.358	84	185744	51.10	ug/L	99
25) methyl acetate	7.118	43	101136	45.58	ug/L	99
26) methyl tert butyl ether	7.714	73	449507	50.84	ug/L	98
27) trans-1,2-dichloroethene	7.740	96	177353	51.38	ug/L	99
28) hexane	8.091	57	294311	58.57	ug/L	99
29) di-isopropyl ether	8.305	45	656955	53.04	ug/L	99
30) ethyl tert-butyl ether	8.760	59	585438	51.94	ug/L	98
31) 2-butanone	8.959	72	55636	188.25	ug/L	93
32) 1,1-dichloroethane	8.315	63	341251	51.86	ug/L	99
33) chloroprene	8.415	53	280239	53.47	ug/L	99
34) acrylonitrile	7.651	53	52497	49.37	ug/L	96
35) vinyl acetate	8.253	86	31748	50.05	ug/L	97
36) ethyl acetate	8.975	45	20806	47.53	ug/L	90
37) 2,2-dichloropropane	9.058	77	281971	54.60	ug/L	97
38) cis-1,2-dichloroethene	9.027	96	205253	52.18	ug/L	99
39) propionitrile	9.042	54	159241	477.97	ug/L	90
40) bromochloromethane	9.320	130	127048	52.42	ug/L	96
41) tetrahydrofuran	9.335	42	36090	45.56	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200804.d
 Acq On : 19 Feb 2020 7:47 am
 Operator : edwardd
 Sample : bs Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 08:37:44 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) chloroform	9.403	83	340281	53.52	ug/L	98
43) tert-butyl formate	9.445	59	148135	52.41	ug/L	97
44) isobutyl alcohol	9.801	43	48254	454.28	ug/L	# 74
46) methacrylonitrile	9.236	67	56097	47.48	ug/L	96
47) 1,1,1-trichloroethane	9.665	97	300493	54.31	ug/L	95
48) cyclohexane	9.769	84	270834	53.76	ug/L	98
49) 1,1-dichloropropene	9.832	75	258390	53.11	ug/L	99
50) tert-amyl alcohol	9.963	73	29551	226.83	ug/L	93
51) carbon tetrachloride	9.858	117	275887	54.77	ug/L	98
54) 2,2,4-trimethylpentane	10.172	57	787020	58.72	ug/L	99
55) tert-amyl methyl ether	10.162	73	535309	49.92	ug/L	99
56) n-butyl alcohol	10.549	56	175539	2416.20	ug/L	98
57) benzene	10.078	78	721905	50.53	ug/L	99
58) heptane	10.329	57	170947	59.94	ug/L	97
59) isopropyl acetate	9.994	87	31241	47.90	ug/L	93
60) 1,2-dichloroethane	10.104	62	237847	47.70	ug/L	98
61) trichloroethene	10.800	95	192734	51.94	ug/L	98
62) ethyl acrylate	10.789	55	187426	48.15	ug/L	99
63) 2-nitropropane	11.558	41	35095	49.82	ug/L	93
64) 2-chloroethyl vinyl ether	11.590	63	468069	286.41	ug/L	99
65) methyl methacrylate	11.056	100	36733	47.48	ug/L	96
66) 1,2-dichloropropane	11.088	63	204060	52.81	ug/L	99
67) methylcyclohexane	11.093	83	345591	58.58	ug/L	97
68) dibromomethane	11.197	93	110203	50.99	ug/L	98
69) bromodichloromethane	11.354	83	263442	52.69	ug/L	99
70) epichlorohydrin	11.679	57	66080	233.96	ug/L	98
71) cis-1,3-dichloropropene	11.809	75	321840	53.61	ug/L	98
72) 4-methyl-2-pentanone	11.914	58	206081	182.63	ug/L	99
73) 3-methyl-1-butanol	11.914	70	63858	959.16	ug/L	98
76) toluene	12.186	92	448087	51.17	ug/L	99
77) trans-1,3-dichloropropene	12.374	75	273476	52.17	ug/L	98
78) ethyl methacrylate	12.364	69	196750	49.46	ug/L	99
79) 1,1,2-trichloroethane	12.594	83	129027	50.37	ug/L	98
80) 2-hexanone	12.756	58	188501	182.87	ug/L	99
81) tetrachloroethene	12.735	166	204389	51.83	ug/L	99
82) 1,3-dichloropropane	12.772	76	249381	49.77	ug/L	99
83) butyl acetate	12.834	56	97160	46.11	ug/L	99
84) dibromochloromethane	13.012	129	190797	51.08	ug/L	99
85) 1,2-dibromoethane	13.164	107	167505	50.11	ug/L	100
86) n-butyl ether	13.603	57	828668	53.85	ug/L	99
87) chlorobenzene	13.645	112	495415	52.05	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.708	131	191564	52.63	ug/L	98
89) ethylbenzene	13.703	91	824104	51.67	ug/L	99
90) m,p-xylene	13.823	106	644357	105.52	ug/L	99
91) o-xylene	14.220	91	665645	51.32	ug/L	100
92) styrene	14.236	104	527944	53.67	ug/L	97
93) n-amyl acetate	14.268	70	106904	48.06	ug/L	95
94) bromoform	14.461	173	115177	50.51	ug/L	97
95) butyl acrylate	14.058	55	321734	49.58	ug/L	99
96) isopropylbenzene	14.571	105	812262	52.44	ug/L	99
97) cis-1,4-dichloro-2-butene	14.607	88	64375	49.31	ug/L	97
100) bromobenzene	14.947	156	218143	51.15	ug/L	99
101) 1,1,2,2-tetrachloroethane	14.848	83	173949	47.28	ug/L	100
102) trans-1,4-dichloro-2-b...	14.885	53	43202	46.72	ug/L	92
103) 1,2,3-trichloropropane	14.937	110	44033	46.10	ug/L	97
104) n-propylbenzene	14.984	91	956589	51.55	ug/L	99
105) 2-chlorotoluene	15.115	126	206945	51.13	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200804.d
 Acq On : 19 Feb 2020 7:47 am
 Operator : edwardd
 Sample : bs Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 08:37:44 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.225	91	584844	51.49	ug/L	99
107) 1,3,5-trimethylbenzene	15.141	105	676940	51.99	ug/L	99
108) tert-butylbenzene	15.476	119	576268	52.34	ug/L	99
109) 1,2,4-trimethylbenzene	15.528	105	678711	52.15	ug/L	100
110) sec-butylbenzene	15.695	105	871515	52.18	ug/L	100
111) 1,3-dichlorobenzene	15.863	146	390830	50.68	ug/L	98
112) p-isopropyltoluene	15.826	119	730763	52.70	ug/L	99
113) benzyl chloride	16.051	91	350172	50.73	ug/L	100
114) 1,4-dichlorobenzene	15.957	146	398824	50.12	ug/L	100
115) 1,2-dichlorobenzene	16.328	146	373602	50.64	ug/L	99
116) n-butylbenzene	16.234	92	395987	53.49	ug/L	98
117) 1,2-dibromo-3-chloropr...	17.092	157	33568	46.44	ug/L	98
118) 1,3,5-trichlorobenzene	17.280	180	340123	52.09	ug/L	99
119) 1,2,4-trichlorobenzene	17.918	180	286970	52.64	ug/L	99
120) hexachlorobutadiene	18.038	225	156194	52.14	ug/L	98
121) naphthalene	18.211	128	486145	51.85	ug/L	98
122) 1,2,3-trichlorobenzene	18.441	180	245038	52.35	ug/L	96
123) hexachloroethane	16.616	201	135573	54.17	ug/L	98
124) 2-ethylhexyl acrylate	17.950	70	33362	9.03	ug/L	93
125) 2-methylnaphthalene	19.445	142	126009	28.27	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
Data File : 2a200804.d
Acq On : 19 Feb 2020 7:47 am
Operator : edwarddd
Sample : bs Inst : I
Misc : MS41191,V2A8686,w,,,1
ALS Vial : 3 Sample Multiplier: 1

Inst : Instrument #

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

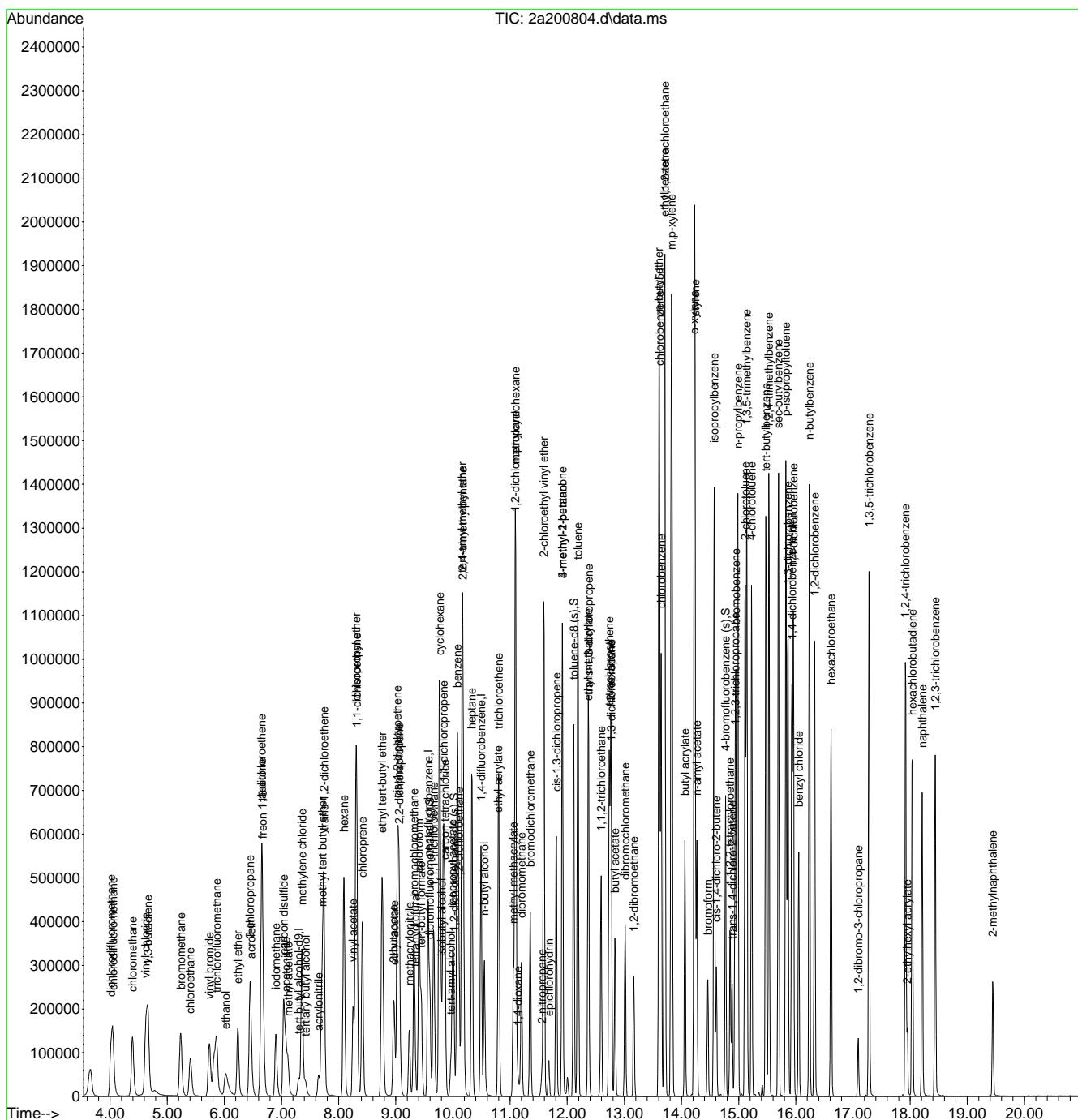
Quant Results File: M2A8671.RES

Quant Time: Feb 19 08:37:44 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2024

OLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319845.d
 Acq On : 18 Feb 2020 10:41 am
 Operator : edwardd
 Sample : JD3305-10ms Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:19:51 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	94536	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	160727	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	220109	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	195033	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	85113	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	60259	47.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	95.98%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	59502	47.20	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	94.40%		
74) toluene-d8 (s)	5.976	98	237020	46.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.78%		
97) 4-bromofluorobenzene (s)	8.303	95	79554	48.21	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.42%		
<hr/>						
Target Compounds						
2) 1,4-dioxane	5.261	88	25933	1367.78	ug/L	100
3) ethanol	2.476	45	113913	5359.07	ug/L	97
4) tertiary butyl alcohol	3.108	59	57792	270.54	ug/L	97
6) chlorodifluoromethane	1.648	51	98165	64.36	ug/L	99
7) dichlorodifluoromethane	1.635	85	117762	58.00	ug/L	99
8) chloromethane	1.786	50	97433	60.01	ug/L	99
9) vinyl chloride	1.875	62	115875	64.19	ug/L	99
10) bromomethane	2.123	94	17491	41.68	ug/L	99
11) chloroethane	2.203	64	52483	63.58	ug/L	94
12) vinyl bromide	2.341	106	57693	58.58	ug/L	99
13) trichlorofluoromethane	2.382	101	111564	59.85	ug/L	98
14) ethyl ether	2.565	74	39932	54.55	ug/L	96
15) 2-chloropropane	2.662	43	113625	55.69	ug/L	98
16) acrolein	2.668	56	15358	46.84	ug/L	99
17) freon 113	2.739	151	60493	68.48	ug/L	95
18) 1,1-dichloroethene	2.748	96	65411	58.31	ug/L	89
19) acetone	2.758	58	28836	178.58	ug/L	91
20) acetonitrile	2.950	40	54918	439.69	ug/L	96
21) iodomethane	2.864	142	17860	64.07	ug/L	96
22) iso-butyl alcohol	4.414	43	40080	453.10	ug/L	97
23) carbon disulfide	2.922	76	165145	56.60	ug/L	97
24) methylene chloride	3.076	84	62058	55.21	ug/L	98
25) methyl acetate	2.967	74	14015	47.96	ug/L #	87
26) methyl tert butyl ether	3.242	73	181838	48.78	ug/L	99
27) trans-1,2-dichloroethene	3.259	96	65615	55.44	ug/L	98
28) hexane	3.438	57	110877	69.56	ug/L	97
29) di-isopropyl ether	3.547	45	202127	50.90	ug/L	95
30) ethyl tert-butyl ether	3.791	59	192446	50.76	ug/L	99
31) 2-butanone	3.913	72	41271	192.90	ug/L	98
32) 1,1-dichloroethane	3.554	63	109730	52.67	ug/L	98
33) chloroprene	3.605	53	94192	54.99	ug/L	96
34) acrylonitrile	3.223	53	30673	49.48	ug/L	96
35) vinyl acetate	3.531	86	17200	54.03	ug/L #	74
36) ethyl acetate	3.923	45	13507	49.16	ug/L #	84
37) 2,2-dichloropropane	3.952	77	89515	51.44	ug/L	100
38) cis-1,2-dichloroethene	3.942	96	68825	53.55	ug/L	91
39) propionitrile	3.961	54	102708	404.83	ug/L	94
40) methyl acrylate	3.968	85	12193	48.16	ug/L #	79
41) bromochloromethane	4.106	128	32422	51.20	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319845.d
 Acq On : 18 Feb 2020 10:41 am
 Operator : edwardd
 Sample : JD3305-10ms
 Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:19:51 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) tetrahydrofuran	4.115	72	11272	45.42	ug/L	93
43) chloroform	4.163	83	102125	49.46	ug/L	99
45) methacrylonitrile	4.067	67	31875	48.04	ug/L	95
46) 1,1,1-trichloroethane	4.301	97	90779	51.91	ug/L	96
47) cyclohexane	4.359	84	97024	57.03	ug/L	93
48) 1,1-dichloropropene	4.407	75	84227	54.02	ug/L	97
49) carbon tetrachloride	4.414	117	75935	52.17	ug/L	99
50) isopropyl acetate	4.526	87	17700	48.78	ug/L	96
51) tert amyl alcohol	4.504	55	17826	227.83	ug/L #	90
54) tert-amyl methyl ether	4.616	73	177364	50.24	ug/L	98
55) 2,2,4-trimethylpentane	4.616	57	185371	62.85	ug/L	98
56) n-butyl alcohol	4.889	56	144227	2470.63	ug/L	98
57) benzene	4.555	78	243666	55.80	ug/L	98
58) heptane	4.731	57	47971	69.57	ug/L	90
59) 1,2-dichloroethane	4.581	62	66077	45.14	ug/L	99
60) trichloroethylene	5.023	95	63413	55.40	ug/L	97
61) ethyl acrylate	5.043	55	100425	51.09	ug/L	99
62) 2-nitropropane	5.575	41	16640	45.59	ug/L	90
64) methyl methacrylate	5.226	100	21319	51.61	ug/L	94
65) 1,2-dichloropropane	5.222	63	60504	54.01	ug/L	90
66) methylcyclohexane	5.213	83	114180	65.58	ug/L	99
67) dibromomethane	5.293	93	35295	50.73	ug/L	96
68) bromodichloromethane	5.412	83	77917	53.72	ug/L	99
69) cis-1,3-dichloropropene	5.749	75	102380	52.94	ug/L	99
70) epichlorohydrin	5.659	57	30453	217.25	ug/L	95
71) 4-methyl-2-pentanone	5.848	58	130483	201.70	ug/L	97
72) 3-methyl-1-butanol	5.867	70	54477	989.65	ug/L	99
75) toluene	6.031	92	155838	53.18	ug/L	96
76) trans-1,3-dichloropropene	6.201	75	86298	48.59	ug/L	95
77) ethyl methacrylate	6.224	69	90101	49.33	ug/L	98
78) 1,1,2-trichloroethane	6.374	83	48256	51.10	ug/L	98
79) 2-hexanone	6.538	58	127835	186.61	ug/L	98
80) tetrachloroethene	6.467	166	80098	56.44	ug/L	96
81) 1,3-dichloropropane	6.522	76	91503	48.63	ug/L	95
82) butyl acetate	6.621	56	53345	50.17	ug/L	96
83) dibromochloromethane	6.708	129	62542	50.14	ug/L	99
84) 1,2-dibromoethane	6.824	107	68266	48.81	ug/L	91
85) n-butyl ether	7.295	57	259258	54.62	ug/L	100
86) chlorobenzene	7.250	112	166810	52.17	ug/L	95
87) 1,1,1,2-tetrachloroethane	7.321	131	55321	50.56	ug/L	93
88) ethylbenzene	7.324	91	275652	52.10	ug/L	98
89) m,p-xylene	7.440	106	216199	101.86	ug/L	99
90) o-xylene	7.796	106	108309	52.77	ug/L	93
91) butyl acrylate	7.716	55	135619	48.65	ug/L	100
92) styrene	7.812	104	177582	52.26	ug/L	98
93) bromoform	7.988	173	45802	51.77	ug/L	99
94) isopropylbenzene	8.133	105	276893	52.34	ug/L	98
95) cis-1,4-dichloro-2-butene	8.181	88	21477	43.50	ug/L	95
98) bromobenzene	8.447	156	71666	55.92	ug/L	93
99) 1,1,2,2-tetrachloroethane	8.418	83	81113	53.40	ug/L	96
100) trans-1,4-dichloro-2-b...	8.454	53	17289	45.98	ug/L	95
101) 1,2,3-trichloropropane	8.479	110	22568	48.40	ug/L	97
102) n-propylbenzene	8.524	91	300990	54.21	ug/L	98
103) 2-chlorotoluene	8.624	126	63542	53.78	ug/L	97
104) 4-chlorotoluene	8.736	126	61034	54.13	ug/L	91
105) 1,3,5-trimethylbenzene	8.694	105	206577	51.93	ug/L	97
106) tert-butylbenzene	8.999	119	197159	54.97	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319845.d
 Acq On : 18 Feb 2020 10:41 am
 Operator : edwardd
 Sample : JD3305-10ms Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:19:51 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

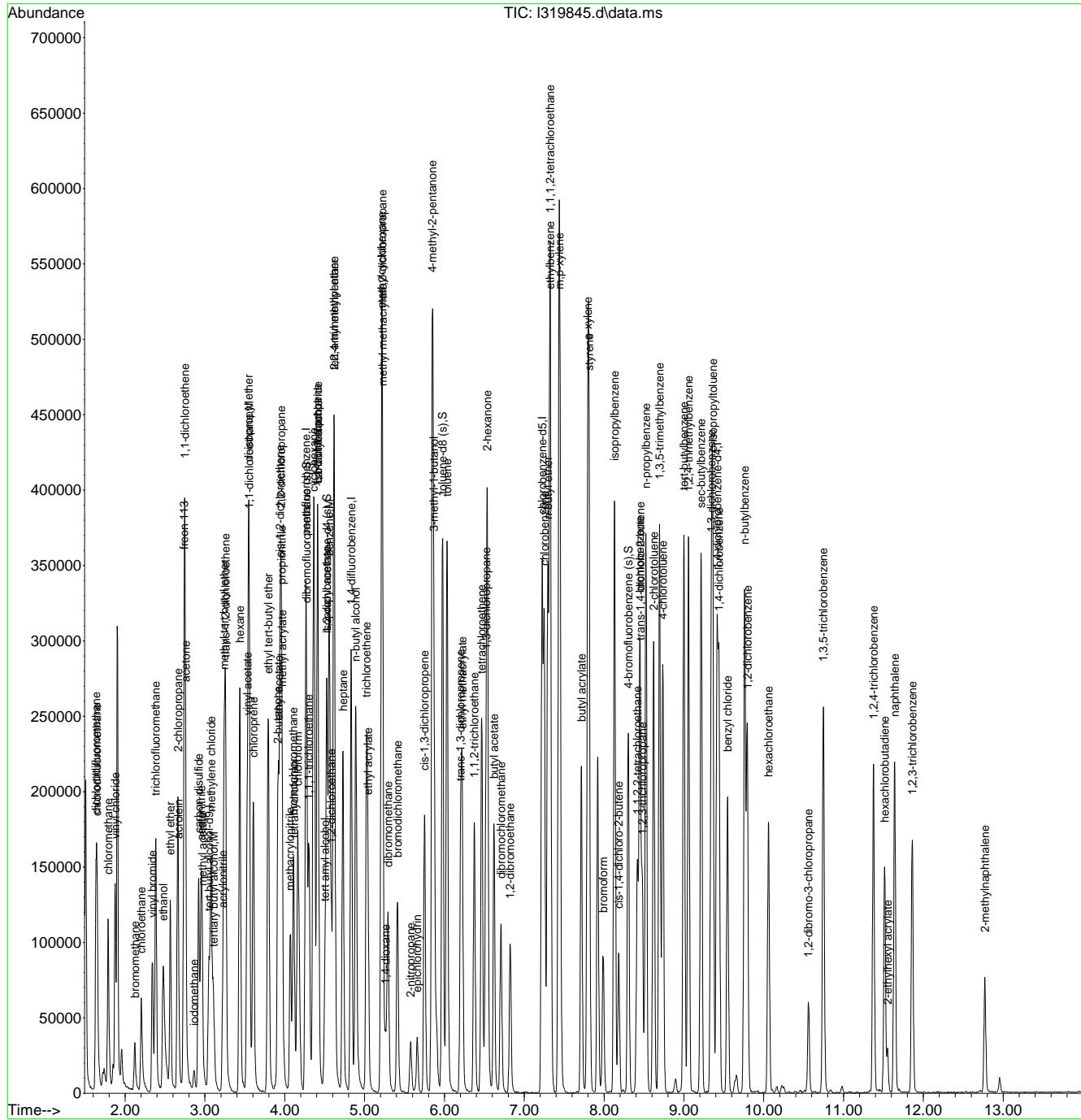
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	9.057	105	207716	51.83	ug/L	99
108) sec-butylbenzene	9.214	105	267778	56.22	ug/L	99
109) 1,3-dichlorobenzene	9.343	146	126602	56.11	ug/L	95
110) p-isopropyltoluene	9.362	119	217197	53.44	ug/L	98
111) 1,4-dichlorobenzene	9.439	146	121277	54.88	ug/L	98
112) 1,2-dichlorobenzene	9.795	146	111680	52.70	ug/L	97
113) n-butylbenzene	9.760	92	106255	57.30	ug/L	99
114) 1,2-dibromo-3-chloropr...	10.559	157	20417	47.00	ug/L	97
115) 1,3,5-trichlorobenzene	10.745	180	92008	56.59	ug/L	99
116) 1,2,4-trichlorobenzene	11.377	180	79096	55.91	ug/L	96
117) hexachlorobutadiene	11.515	225	33509	56.70	ug/L	98
118) naphthalene	11.640	128	189901	48.68	ug/L	99
119) 1,2,3-trichlorobenzene	11.862	180	62735	50.61	ug/L	98
120) hexachloroethane	10.058	119	37049	53.23	ug/L	96
121) benzyl chloride	9.548	91	143272	51.30	ug/L	98
122) 2-ethylhexyl acrylate	11.554	70	7849	8.70	ug/L #	82
123) 2-methylnaphthalene	12.770	142	41303	19.44	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319845.d
 Acq On : 18 Feb 2020 10:41 am
 Operator : edwardd
 Sample : JD3305-10ms
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 10 Sample Multiplier: 1
 Inst : GCMSL

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Results File: ML9325.RES
 Quant Time: Feb 18 20:19:51 2020
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319846.d
 Acq On : 18 Feb 2020 11:08 am
 Operator : edwardd
 Sample : JD3305-10msd Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:20:10 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	91451	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	163327	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	223758	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	195809	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.413	152	84535	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	59561	46.68	ug/L	0.00
Spiked Amount 50.000		Range 80 - 120		Recovery =	93.36%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	59161	46.16	ug/L	0.00
Spiked Amount 50.000		Range 81 - 124		Recovery =	92.32%	
74) toluene-d8 (s)	5.973	98	241394	47.57	ug/L	0.00
Spiked Amount 50.000		Range 80 - 120		Recovery =	95.14%	
97) 4-bromofluorobenzene (s)	8.303	95	78904	48.14	ug/L	0.00
Spiked Amount 50.000		Range 80 - 120		Recovery =	96.28%	
Target Compounds						
2) 1,4-dioxane	5.264	88	24667	1344.89	ug/L	86
3) ethanol	2.479	45	109819	5340.75	ug/L	100
4) tertiary butyl alcohol	3.105	59	56693	274.35	ug/L	96
6) chlorodifluoromethane	1.648	51	101608	65.56	ug/L	98
7) dichlorodifluoromethane	1.635	85	121918	59.09	ug/L	99
8) chloromethane	1.786	50	96991	58.79	ug/L	98
9) vinyl chloride	1.876	62	116354	63.43	ug/L	100
10) bromomethane	2.123	94	24822	58.21	ug/L	93
11) chloroethane	2.203	64	52454	62.53	ug/L	97
12) vinyl bromide	2.341	106	58650	58.61	ug/L	95
13) trichlorofluoromethane	2.383	101	113170	59.75	ug/L	98
14) ethyl ether	2.566	74	40528	54.48	ug/L	94
15) 2-chloropropane	2.659	43	116363	56.12	ug/L	98
16) acrolein	2.668	56	16238	48.74	ug/L	96
17) freon 113	2.742	151	62616	69.75	ug/L	92
18) 1,1-dichloroethene	2.748	96	66198	58.07	ug/L	90
19) acetone	2.758	58	28315	172.56	ug/L	95
20) acetonitrile	2.951	40	57732	454.86	ug/L	96
21) iodomethane	2.864	142	29973	105.80	ug/L	91
22) iso-butyl alcohol	4.411	43	36984	411.44	ug/L	98
23) carbon disulfide	2.922	76	169353	57.12	ug/L	100
24) methylene chloride	3.076	84	62857	55.03	ug/L	96
25) methyl acetate	2.963	74	13519	45.52	ug/L #	79
26) methyl tert butyl ether	3.243	73	182640	48.22	ug/L	100
27) trans-1,2-dichloroethene	3.259	96	67792	56.37	ug/L	93
28) hexane	3.435	57	113149	69.85	ug/L	98
29) di-isopropyl ether	3.547	45	204741	50.73	ug/L	94
30) ethyl tert-butyl ether	3.791	59	194200	50.41	ug/L	99
31) 2-butanone	3.913	72	39982	183.90	ug/L	100
32) 1,1-dichloroethane	3.554	63	110076	52.00	ug/L	96
33) chloroprene	3.605	53	96792	55.60	ug/L	96
34) acrylonitrile	3.220	53	28377	45.05	ug/L	95
35) vinyl acetate	3.528	86	15979	49.40	ug/L #	89
36) ethyl acetate	3.920	45	13437	48.12	ug/L #	74
37) 2,2-dichloropropane	3.952	77	91566	51.79	ug/L	96
38) cis-1,2-dichloroethene	3.939	96	69580	53.28	ug/L	95
39) propionitrile	3.961	54	98258	381.13	ug/L	83
40) methyl acrylate	3.965	85	11745	45.66	ug/L #	73
41) bromochloromethane	4.106	128	32695	50.81	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319846.d
 Acq On : 18 Feb 2020 11:08 am
 Operator : edwardd
 Sample : JD3305-10msd Inst : GCMSL
 Misc : MS41192,VL9424,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:20:10 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) tetrahydrofuran	4.115	72	11054	43.83	ug/L	97
43) chloroform	4.160	83	103862	49.50	ug/L	98
45) methacrylonitrile	4.067	67	31449	46.64	ug/L	97
46) 1,1,1-trichloroethane	4.302	97	92841	52.24	ug/L	99
47) cyclohexane	4.359	84	95441	55.21	ug/L	98
48) 1,1-dichloropropene	4.407	75	86026	54.30	ug/L	97
49) carbon tetrachloride	4.414	117	78216	52.88	ug/L	98
50) isopropyl acetate	4.526	87	17461	47.35	ug/L #	87
51) tert amyl alcohol	4.501	55	16758	210.77	ug/L	90
54) tert-amyl methyl ether	4.616	73	179887	50.12	ug/L	99
55) 2,2,4-trimethylpentane	4.616	57	190307	63.47	ug/L	97
56) n-butyl alcohol	4.889	56	137761	2321.38	ug/L	98
57) benzene	4.555	78	246663	55.56	ug/L	98
58) heptane	4.725	57	48369	69.00	ug/L	84
59) 1,2-dichloroethane	4.581	62	66783	44.87	ug/L	97
60) trichloroethylene	5.024	95	66077	56.79	ug/L	97
61) ethyl acrylate	5.040	55	97285	48.69	ug/L	100
62) 2-nitropropane	5.576	41	162228	43.74	ug/L	91
64) methyl methacrylate	5.223	100	21486	51.17	ug/L	95
65) 1,2-dichloropropane	5.223	63	62660	55.02	ug/L	89
66) methylcyclohexane	5.213	83	116196	65.65	ug/L	99
67) dibromomethane	5.293	93	36309	51.34	ug/L	97
68) bromodichloromethane	5.409	83	79386	53.85	ug/L	97
69) cis-1,3-dichloropropene	5.749	75	104404	53.10	ug/L	98
70) epichlorohydrin	5.662	57	28093	197.15	ug/L	94
71) 4-methyl-2-pentanone	5.848	58	127937	194.54	ug/L	99
72) 3-methyl-1-butanol	5.868	70	51181	914.61	ug/L	96
75) toluene	6.034	92	159072	54.07	ug/L	98
76) trans-1,3-dichloropropene	6.204	75	88993	49.90	ug/L	100
77) ethyl methacrylate	6.221	69	91345	49.81	ug/L	96
78) 1,1,2-trichloroethane	6.375	83	48606	51.27	ug/L	98
79) 2-hexanone	6.538	58	122855	178.63	ug/L	95
80) tetrachloroethene	6.468	166	82834	58.14	ug/L	96
81) 1,3-dichloropropane	6.519	76	91756	48.57	ug/L	97
82) butyl acetate	6.622	56	51170	47.94	ug/L	96
83) dibromochloromethane	6.705	129	62969	50.28	ug/L	98
84) 1,2-dibromoethane	6.824	107	68493	48.78	ug/L	96
85) n-butyl ether	7.292	57	266821	55.99	ug/L	99
86) chlorobenzene	7.251	112	171411	53.40	ug/L	93
87) 1,1,1,2-tetrachloroethane	7.318	131	56201	51.16	ug/L	98
88) ethylbenzene	7.324	91	277251	52.19	ug/L	98
89) m,p-xylene	7.440	106	222025	104.19	ug/L	94
90) o-xylene	7.796	106	109675	53.23	ug/L	95
91) butyl acrylate	7.716	55	136184	48.66	ug/L	99
92) styrene	7.812	104	177885	52.14	ug/L	97
93) bromoform	7.989	173	46316	52.14	ug/L	97
94) isopropylbenzene	8.130	105	282018	53.09	ug/L	98
95) cis-1,4-dichloro-2-butene	8.184	88	21115	42.60	ug/L	94
98) bromobenzene	8.447	156	73673	57.88	ug/L	95
99) 1,1,2,2-tetrachloroethane	8.415	83	78647	52.13	ug/L	97
100) trans-1,4-dichloro-2-b...	8.454	53	16445	44.03	ug/L	97
101) 1,2,3-trichloropropane	8.480	110	22292	48.14	ug/L	98
102) n-propylbenzene	8.524	91	305596	55.42	ug/L	97
103) 2-chlorotoluene	8.621	126	65475	55.80	ug/L	94
104) 4-chlorotoluene	8.736	126	62277	55.61	ug/L	93
105) 1,3,5-trimethylbenzene	8.695	105	209741	53.09	ug/L	95
106) tert-butylbenzene	8.999	119	199530	56.01	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319846.d
 Acq On : 18 Feb 2020 11:08 am
 Operator : edwardd
 Sample : JD3305-10msd Inst : GCMSL
 Misc : MS41192,VL9424,,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 20:20:10 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
107) 1,2,4-trimethylbenzene	9.057	105	208965	52.50	ug/L	97
108) sec-butylbenzene	9.214	105	273179	57.75	ug/L	99
109) 1,3-dichlorobenzene	9.343	146	127164	56.75	ug/L	98
110) p-isopropyltoluene	9.362	119	219627	54.41	ug/L	98
111) 1,4-dichlorobenzene	9.439	146	124244	56.61	ug/L	93
112) 1,2-dichlorobenzene	9.795	146	112585	53.49	ug/L	97
113) n-butylbenzene	9.763	92	109748	59.59	ug/L	98
114) 1,2-dibromo-3-chloropr...	10.559	157	19877	46.07	ug/L	95
115) 1,3,5-trichlorobenzene	10.748	180	91086	56.40	ug/L	93
116) 1,2,4-trichlorobenzene	11.377	180	80608	57.36	ug/L	97
117) hexachlorobutadiene	11.515	225	35642	60.73	ug/L	94
118) naphthalene	11.640	128	185076	47.77	ug/L	100
119) 1,2,3-trichlorobenzene	11.862	180	63933	51.93	ug/L	97
120) hexachloroethane	10.055	119	36888	53.36	ug/L	97
121) benzyl chloride	9.548	91	138476	49.92	ug/L	97
122) 2-ethylhexyl acrylate	11.554	70	7128	7.95	ug/L	98
123) 2-methylnaphthalene	12.773	142	35370	17.03	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\v19424
Data File : 1319846.d
Acq On : 18 Feb 2020 11:08 am
Operator : edwardd
Sample : JD3305-10msd Inst : GCMSL
Misc : MS41192,VL9424,5,,,1
ALS Vial : 11 Sample Multiplier: 1

Inst : GCMSI

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

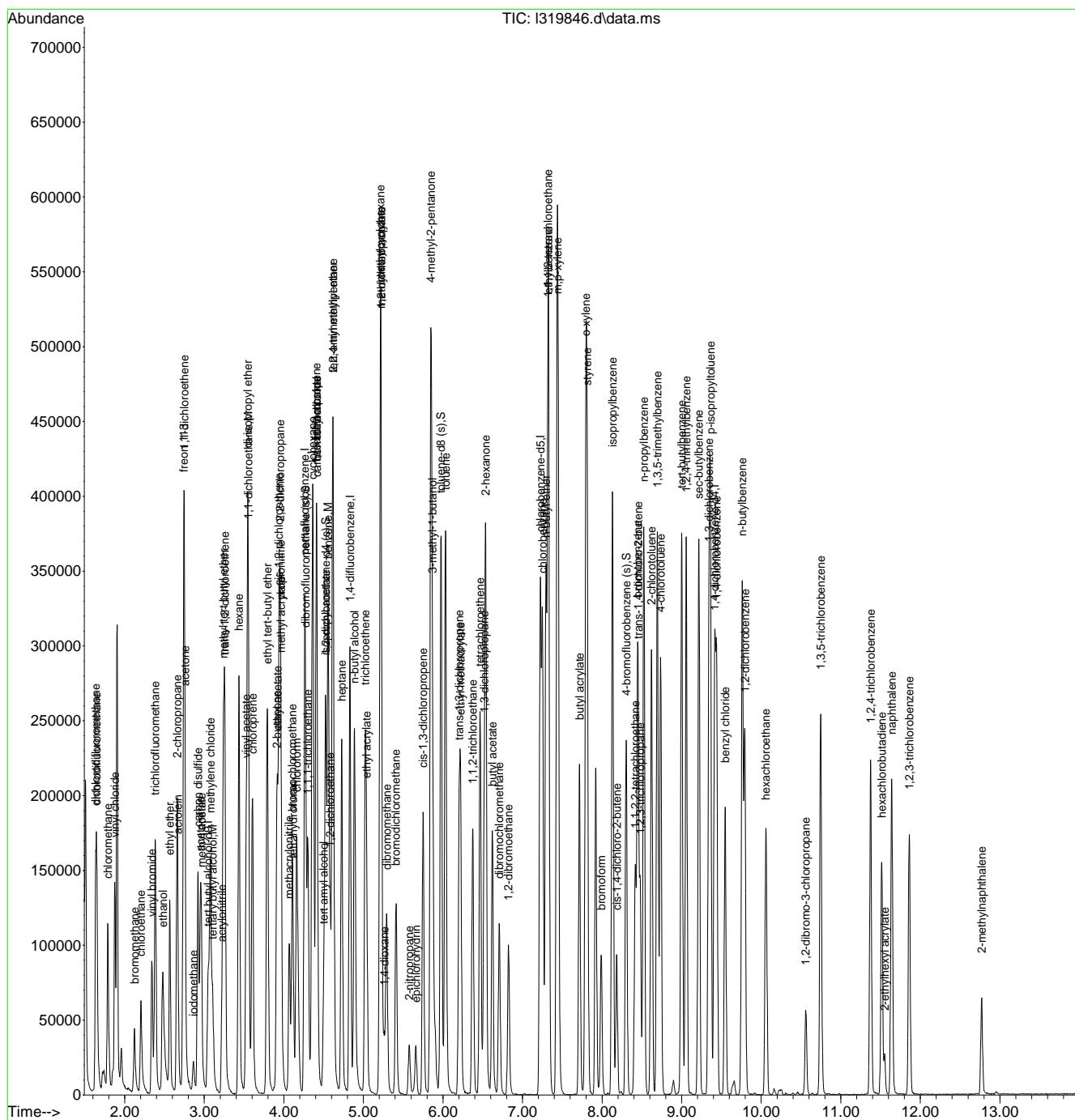
Quant Results File: ML9325.RES

Quant Time: Feb 18 20:20:10 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200814.d
 Acq On : 19 Feb 2020 1:30 pm
 Operator : edwardd
 Sample : JD3162-1ms
 Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:10:49 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.296	65	80311	500.00	ug/L	0.00
5) pentafluorobenzene	9.560	168	315356	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.486	114	482926	50.00	ug/L	0.00
74) chlorobenzene-d5	13.609	117	412282	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	213499	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.592	113	148745	51.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 103.78%		
53) 1,2-dichloroethane-d4 (s)	10.010	65	156526	48.85	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 97.70%		
75) toluene-d8 (s)	12.113	98	524313	50.10	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.20%		
99) 4-bromofluorobenzene (s)	14.770	95	203975	50.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 101.34%		
Target Compounds						
				Qvalue		
2) ethanol	6.014	45	125687	5199.71	ug/L	100
3) tertiary butyl alcohol	7.411	59	57378	247.93	ug/L	98
4) 1,4-dioxane	11.135	88	28067	1275.55	ug/L	98
6) chlorodifluoromethane	4.043	51	238837	53.96	ug/L	98
7) dichlorodifluoromethane	4.006	85	295668	62.28	ug/L	98
8) chloromethane	4.377	50	280823	49.02	ug/L	99
9) vinyl chloride	4.618	62	286903	52.58	ug/L	98
10) 1,3-butadiene	4.654	54	185075	58.09	ug/L	96
11) bromomethane	5.230	94	171314	47.68	ug/L	99
12) chloroethane	5.392	64	137636	49.16	ug/L	97
13) vinyl bromide	5.732	106	152437	53.05	ug/L	99
14) trichlorofluoromethane	5.847	101	311890	54.83	ug/L	97
15) ethyl ether	6.234	74	87905	46.20	ug/L	98
16) 2-chloropropane	6.448	63	75379	49.82	ug/L	89
17) acrolein	6.454	56	262262	52.04	ug/L	99
18) freon 113	6.652	151	153574	57.81	ug/L	99
19) 1,1-dichloroethene	6.647	96	159210	51.77	ug/L	99
20) acetone	6.652	43	127021	171.71	ug/L	97
21) acetonitrile	7.071	41	161014	427.03	ug/L	96
22) iodomethane	6.898	142	232955	48.75	ug/L	100
23) carbon disulfide	7.034	76	442359	47.41	ug/L	99
24) methylene chloride	7.353	84	178819	48.24	ug/L	98
25) methyl acetate	7.107	43	97784	43.22	ug/L	97
26) methyl tert butyl ether	7.704	73	423446	46.96	ug/L	99
27) trans-1,2-dichloroethene	7.735	96	169314	48.10	ug/L	98
28) hexane	8.086	57	321704	62.78	ug/L	99
29) di-isopropyl ether	8.300	45	613344	48.55	ug/L	98
30) ethyl tert-butyl ether	8.760	59	549917	47.84	ug/L	100
31) 2-butanone	8.959	72	53486	177.46	ug/L	97
32) 1,1-dichloroethane	8.310	63	318377	47.44	ug/L	99
33) chloroprene	8.410	53	265489	49.67	ug/L	98
34) acrylonitrile	7.646	53	48339	44.57	ug/L	99
35) vinyl acetate	8.248	86	29121	45.01	ug/L	95
36) ethyl acetate	8.969	45	20343	45.56	ug/L	88
37) 2,2-dichloropropane	9.053	77	262320	49.80	ug/L	98
38) cis-1,2-dichloroethene	9.022	96	208285	51.92	ug/L	99
39) propionitrile	9.037	54	148904	438.24	ug/L	94
40) bromochloromethane	9.315	130	119436	48.32	ug/L	99
41) tetrahydrofuran	9.330	42	35291	43.69	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200814.d
 Acq On : 19 Feb 2020 1:30 pm
 Operator : edwardd
 Sample : JD3162-1ms Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:10:49 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) chloroform	9.404	83	316320	48.78	ug/L	99
43) tert-butyl formate	9.440	59	123555	42.86	ug/L	96
44) isobutyl alcohol	9.791	43	45864m	423.38	ug/L	
46) methacrylonitrile	9.231	67	54229	45.01	ug/L	99
47) 1,1,1-trichloroethane	9.660	97	283060	50.16	ug/L	95
48) cyclohexane	9.764	84	280585	54.61	ug/L	94
49) 1,1-dichloropropene	9.827	75	246074	49.60	ug/L	99
50) tert-amyl alcohol	9.958	73	27803	209.26	ug/L	95
51) carbon tetrachloride	9.853	117	261236	50.86	ug/L	99
54) 2,2,4-trimethylpentane	10.172	57	812207	59.24	ug/L	99
55) tert-amyl methyl ether	10.157	73	505925	46.12	ug/L	99
56) n-butyl alcohol	10.544	56	156648	2107.81	ug/L	99
57) benzene	10.073	78	685482	46.90	ug/L	100
58) heptane	10.329	57	177963	61.00	ug/L	100
59) isopropyl acetate	9.989	87	30624	45.91	ug/L	99
60) 1,2-dichloroethane	10.099	62	228185	44.74	ug/L	100
61) trichloroethene	10.800	95	219416	57.80	ug/L	99
62) ethyl acrylate	10.790	55	180890	45.43	ug/L	98
63) 2-nitropropane	11.558	41	30420	42.22	ug/L	91
65) methyl methacrylate	11.051	100	36241	45.79	ug/L	98
66) 1,2-dichloropropane	11.088	63	190412	48.17	ug/L	100
67) methylcyclohexane	11.093	83	346041	57.34	ug/L	98
68) dibromomethane	11.192	93	104527	47.28	ug/L	96
69) bromodichloromethane	11.349	83	251561	49.18	ug/L	99
70) epichlorohydrin	11.673	57	63562	220.00	ug/L	97
71) cis-1,3-dichloropropene	11.804	75	305986	49.82	ug/L	99
72) 4-methyl-2-pentanone	11.914	58	201885	174.90	ug/L	99
73) 3-methyl-1-butanol	11.914	70	59146	868.45	ug/L	96
76) toluene	12.181	92	421296	47.82	ug/L	99
77) trans-1,3-dichloropropene	12.369	75	262864	49.85	ug/L	98
78) ethyl methacrylate	12.364	69	191020	47.73	ug/L	99
79) 1,1,2-trichloroethane	12.589	83	123890	48.07	ug/L	97
80) 2-hexanone	12.756	58	182481	175.97	ug/L	97
81) tetrachloroethene	12.735	166	1958456	493.64	ug/L	93
82) 1,3-dichloropropane	12.772	76	239799	47.57	ug/L	98
83) butyl acetate	12.835	56	96267	45.41	ug/L	96
84) dibromochloromethane	13.012	129	186854	49.73	ug/L	99
85) 1,2-dibromoethane	13.164	107	163458	48.60	ug/L	97
86) n-butyl ether	13.603	57	794075	51.29	ug/L	99
87) chlorobenzene	13.640	112	472268	49.32	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.708	131	183500	50.11	ug/L	97
89) ethylbenzene	13.703	91	781445	48.70	ug/L	99
90) m,p-xylene	13.823	106	610657	99.40	ug/L	96
91) o-xylene	14.221	91	633584	48.55	ug/L	99
92) styrene	14.231	104	508283	51.36	ug/L	99
93) n-amyl acetate	14.268	70	105412	47.10	ug/L	99
94) bromoform	14.456	173	112368	48.98	ug/L	99
95) butyl acrylate	14.058	55	317763	48.68	ug/L	99
96) isopropylbenzene	14.571	105	769691	49.40	ug/L	100
97) cis-1,4-dichloro-2-butene	14.608	88	59995	45.68	ug/L	93
100) bromobenzene	14.948	156	210991	49.70	ug/L	99
101) 1,1,2,2-tetrachloroethane	14.848	83	171017	46.71	ug/L	99
102) trans-1,4-dichloro-2-b...	14.880	53	42120	45.76	ug/L	99
103) 1,2,3-trichloropropene	14.932	110	43048	45.28	ug/L	96
104) n-propylbenzene	14.979	91	913589	49.47	ug/L	98
105) 2-chlorotoluene	15.110	126	199867	49.61	ug/L	97
106) 4-chlorotoluene	15.225	91	562359	49.75	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200814.d
 Acq On : 19 Feb 2020 1:30 pm
 Operator : edwardd
 Sample : JD3162-1ms Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:10:49 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

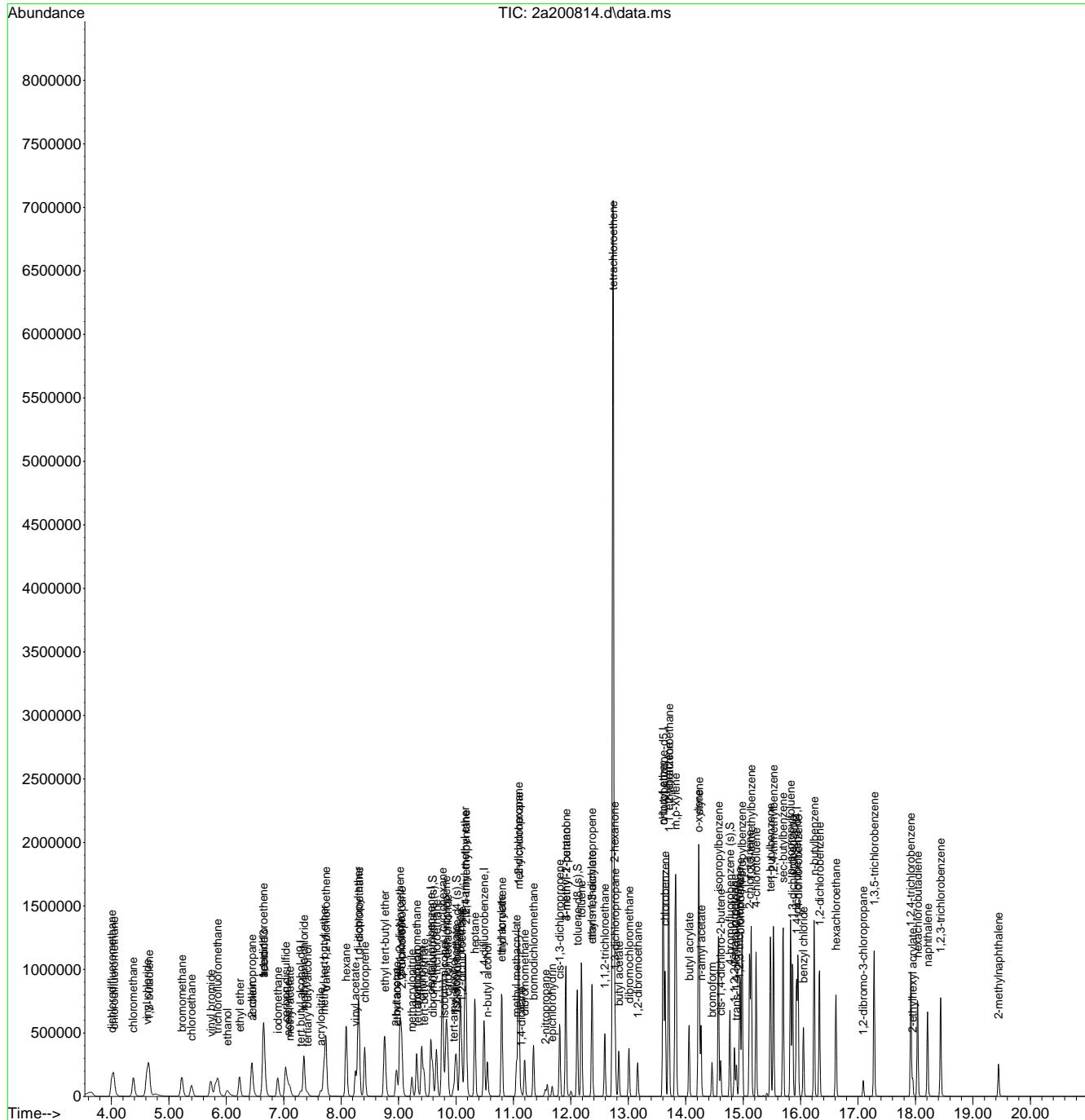
Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	15.141	105	651553	50.28	ug/L	98
108) tert-butylbenzene	15.476	119	553301	50.49	ug/L	99
109) 1,2,4-trimethylbenzene	15.528	105	650929	50.25	ug/L	98
110) sec-butylbenzene	15.696	105	839557	50.50	ug/L	99
111) 1,3-dichlorobenzene	15.858	146	386303	50.33	ug/L	98
112) p-isopropyltoluene	15.826	119	706897	51.22	ug/L	99
113) benzyl chloride	16.046	91	345331	50.26	ug/L	98
114) 1,4-dichlorobenzene	15.957	146	389188	49.14	ug/L	98
115) 1,2-dichlorobenzene	16.328	146	364767	49.67	ug/L	99
116) n-butylbenzene	16.234	92	380757	51.68	ug/L	99
117) 1,2-dibromo-3-chloropr...	17.092	157	33717	46.86	ug/L	93
118) 1,3,5-trichlorobenzene	17.280	180	329918	50.77	ug/L	99
119) 1,2,4-trichlorobenzene	17.918	180	281783	51.93	ug/L	99
120) hexachlorobutadiene	18.039	225	148246	49.72	ug/L	97
121) naphthalene	18.211	128	475232	50.92	ug/L	99
122) 1,2,3-trichlorobenzene	18.436	180	238894	51.27	ug/L	100
123) hexachloroethane	16.616	201	128595	51.62	ug/L	97
124) 2-ethylhexyl acrylate	17.950	70	30621	8.40	ug/L	83
125) 2-methylnaphthalene	19.446	142	120851	27.24	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

```
Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\  
Data File : 2a200814.d  
Acq On   : 19 Feb 2020    1:30 pm  
Operator  : edwardd  
Sample   : JD3162-1ms                      Inst      : Instrument #1  
Misc     : MS41135,V2A8686,w,,,10  
ALS Vial : 13    Sample Multiplier: 1  
  
Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M  
Quant Results File: M2A8671.RES  
Quant Time: Feb 19 21:10:49 2020  
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020  
QLast Update : Thu Feb 06 10:48:34 2020  
Response via : Initial Calibration
```



Manual Integration Approval Summary

Page 1 of 1

Sample Number: JD3162-1MS
Lab FileID: 2A200814.D
Injection Time: 02/19/20 13:30

Method: SW846 8260C
Analyst approved: 02/19/20 21:23 Nizel Eugenio
Supervisor approved: 02/20/20 13:38 Kanya Veerawat

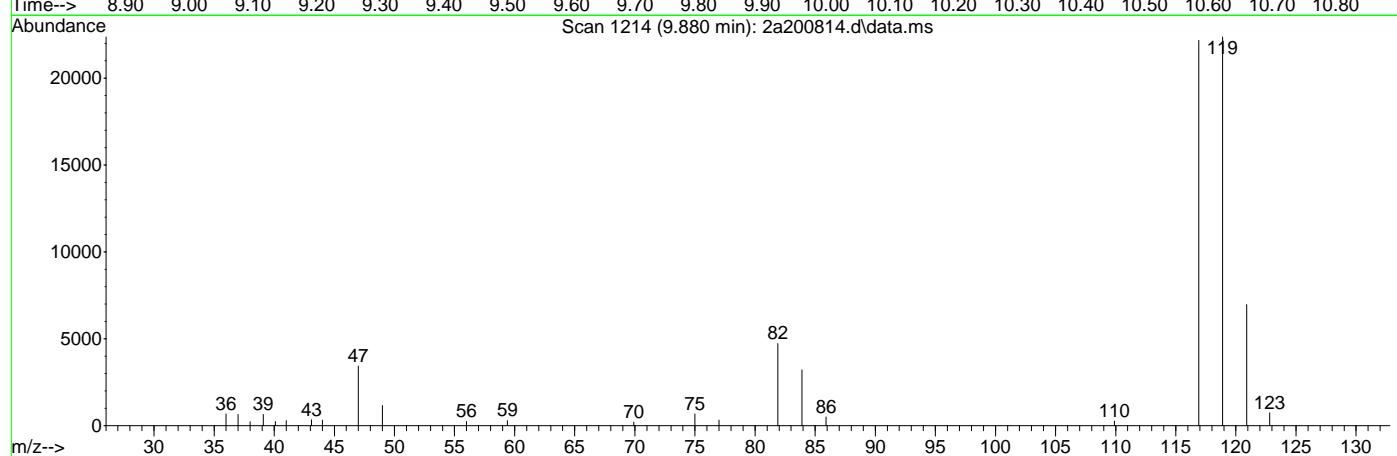
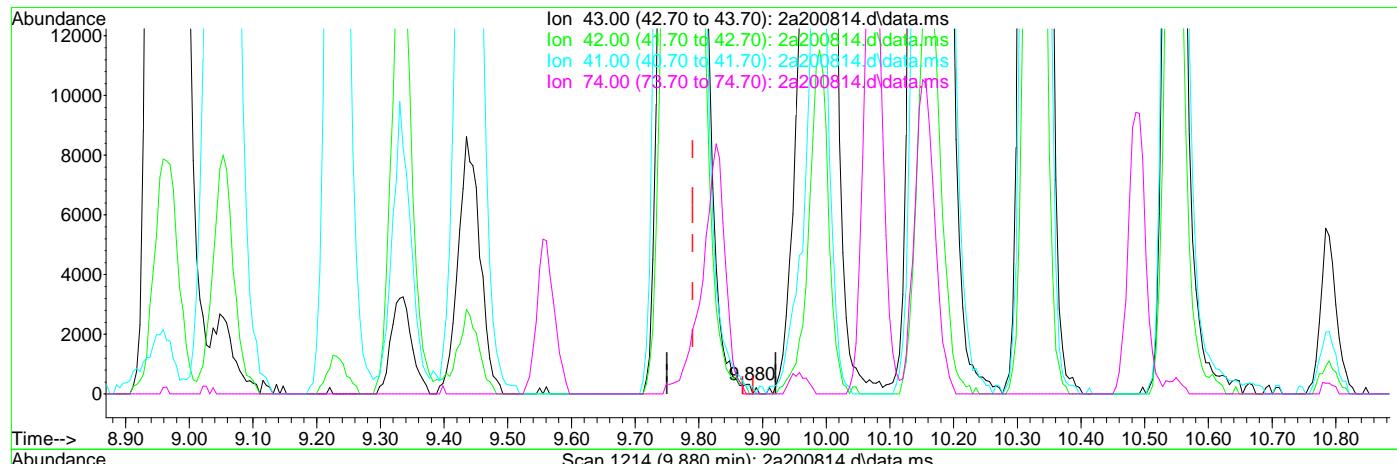
Parameter	CAS	Sig#	R.T. (min.)	Reason
Isobutyl alcohol	78-83-1		9.79	Missed peak

7.4.3.1
7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200814.d
 Acq On : 19 Feb 2020 1:30 pm
 Operator : edwarddd
 Sample : JD3162-1ms
 Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 21:06:04 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration



TIC: 2a200814.d\data.ms

(44) isobutyl alcohol

9.880min (+0.089) 1.88ug/L

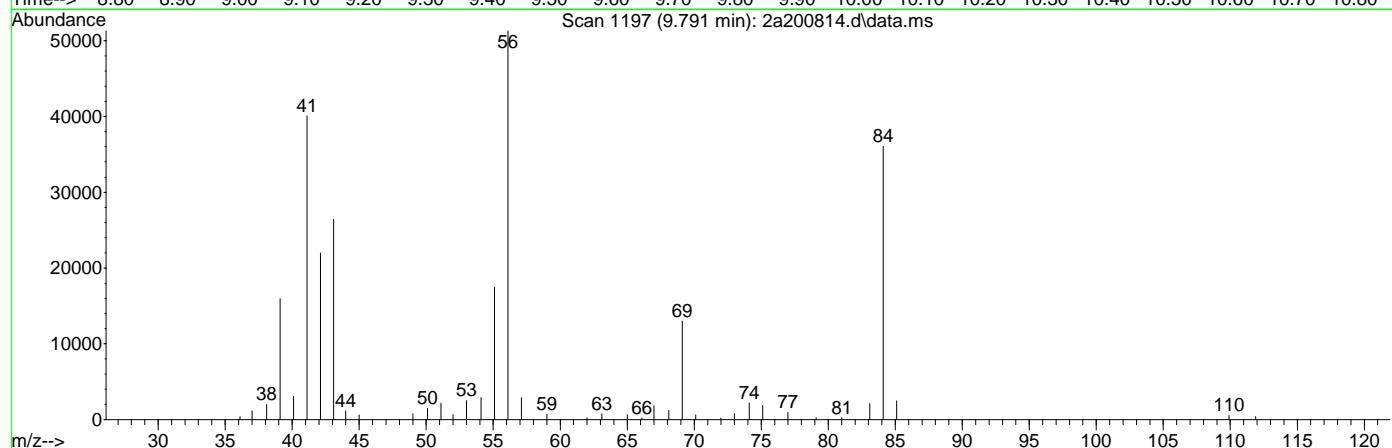
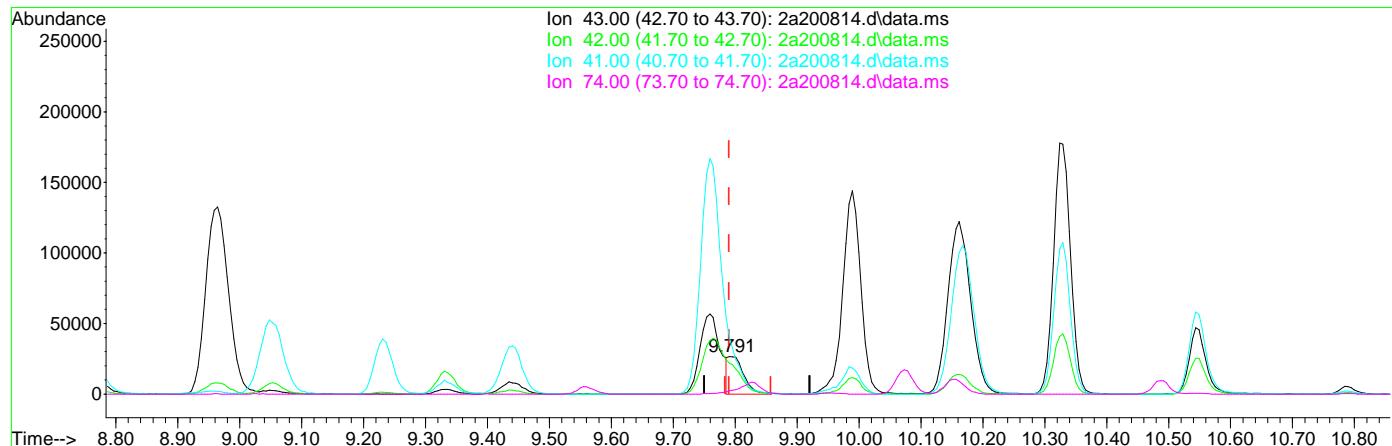
response 204

Ion	Exp%	Act%
43.00	100	100
42.00	79.70	0.00#
41.00	153.80	11.28#
74.00	7.60	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200814.d
 Acq On : 19 Feb 2020 1:30 pm
 Operator : edwarddd
 Sample : JD3162-1ms
 Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 21:09:39 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration



TIC: 2a200814.d\data.ms

(44) isobutyl alcohol

9.791min (+0.000) 423.38ug/L m

response 45864

Ion	Exp%	Act%
43.00	100	100
42.00	79.70	83.18
41.00	153.80	151.59
74.00	7.60	8.30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200815.d
 Acq On : 19 Feb 2020 1:59 pm
 Operator : edwardd
 Sample : JD3162-1msd
 Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:11:50 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	7.296	65	83213	500.00	ug/L	0.00
5) pentafluorobenzene	9.560	168	312140	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.486	114	477595	50.00	ug/L	0.00
74) chlorobenzene-d5	13.608	117	410437	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	213850	50.00	ug/L	0.00
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.592	113	146802	51.74	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 103.48%		
53) 1,2-dichloroethane-d4 (s)	10.010	65	155766	49.15	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 98.30%		
75) toluene-d8 (s)	12.113	98	523627	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.52%		
99) 4-bromofluorobenzene (s)	14.770	95	199251	49.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.82%		
Target Compounds						
2) ethanol	6.019	45	133252	5320.43	ug/L	93
3) tertiary butyl alcohol	7.411	59	59067	246.33	ug/L	98
4) 1,4-dioxane	11.135	88	29308	1285.50	ug/L	97
6) chlorodifluoromethane	4.042	51	241177	55.05	ug/L	99
7) dichlorodifluoromethane	4.006	85	275631	58.65	ug/L	99
8) chloromethane	4.382	50	285888	50.42	ug/L	97
9) vinyl chloride	4.618	62	286341	53.02	ug/L	99
10) 1,3-butadiene	4.649	54	182802	57.97	ug/L	96
11) bromomethane	5.224	94	174084	48.95	ug/L	99
12) chloroethane	5.392	64	140580	50.73	ug/L	94
13) vinyl bromide	5.732	106	153301	53.90	ug/L	99
14) trichlorofluoromethane	5.852	101	301556	53.56	ug/L	98
15) ethyl ether	6.229	74	89575	47.56	ug/L	99
16) 2-chloropropane	6.443	63	76094	50.81	ug/L	97
17) acrolein	6.459	56	24939	49.93	ug/L	97
18) freon 113	6.657	151	146663	55.77	ug/L	98
19) 1,1-dichloroethene	6.647	96	158271	52.00	ug/L	99
20) acetone	6.652	43	127826	174.58	ug/L	97
21) acetonitrile	7.071	41	164306	440.25	ug/L	97
22) iodomethane	6.898	142	234411	49.56	ug/L	98
23) carbon disulfide	7.034	76	450724	48.81	ug/L	97
24) methylene chloride	7.353	84	177866	48.48	ug/L	99
25) methyl acetate	7.107	43	98830	44.13	ug/L	98
26) methyl tert butyl ether	7.709	73	433442	48.56	ug/L	99
27) trans-1,2-dichloroethene	7.735	96	170786	49.02	ug/L	99
28) hexane	8.091	57	296779	58.51	ug/L	99
29) di-isopropyl ether	8.300	45	616822	49.33	ug/L	100
30) ethyl tert-butyl ether	8.755	59	558363	49.08	ug/L	99
31) 2-butanone	8.959	72	53566	179.55	ug/L	94
32) 1,1-dichloroethane	8.310	63	321509	48.40	ug/L	99
33) chloroprene	8.410	53	266970	50.46	ug/L	98
34) acrylonitrile	7.646	53	49331	45.96	ug/L	97
35) vinyl acetate	8.253	86	31407	49.05	ug/L	# 88
36) ethyl acetate	8.974	45	20881	47.25	ug/L	90
37) 2,2-dichloropropane	9.053	77	261506	50.16	ug/L	96
38) cis-1,2-dichloroethene	9.021	96	207085	52.15	ug/L	97
39) propionitrile	9.037	54	150612	447.84	ug/L	99
40) bromochloromethane	9.320	130	121290	49.57	ug/L	92
41) tetrahydrofuran	9.335	42	35610	44.54	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200815.d
 Acq On : 19 Feb 2020 1:59 pm
 Operator : edwardd
 Sample : JD3162-1msd
 Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
 Quant Results File: M2A8671.RES
 Quant Time: Feb 19 21:11:50 2020
 Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020
 QLast Update : Thu Feb 06 10:48:34 2020
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) chloroform	9.403	83	319375	49.76	ug/L	98
43) tert-butyl formate	9.440	59	123285	43.21	ug/L	94
44) isobutyl alcohol	9.796	43	41370	385.83	ug/L	#
46) methacrylonitrile	9.231	67	55171	46.26	ug/L	93
47) 1,1,1-trichloroethane	9.660	97	281761	50.45	ug/L	96
48) cyclohexane	9.769	84	268011	52.70	ug/L	#
49) 1,1-dichloropropene	9.827	75	244927	49.87	ug/L	99
50) tert-amyl alcohol	9.958	73	28207	214.49	ug/L	94
51) carbon tetrachloride	9.853	117	260606	51.26	ug/L	98
54) 2,2,4-trimethylpentane	10.172	57	747776	55.15	ug/L	99
55) tert-amyl methyl ether	10.156	73	507438	46.77	ug/L	99
56) n-butyl alcohol	10.549	56	163586	2225.73	ug/L	99
57) benzene	10.073	78	682462	47.21	ug/L	99
58) heptane	10.329	57	161542	55.99	ug/L	99
59) isopropyl acetate	9.989	87	30941	46.90	ug/L	#
60) 1,2-dichloroethane	10.099	62	227150	45.03	ug/L	99
61) trichloroethene	10.800	95	218923	58.31	ug/L	98
62) ethyl acrylate	10.789	55	182226	46.28	ug/L	98
63) 2-nitropropane	11.558	41	30748	43.15	ug/L	91
65) methyl methacrylate	11.056	100	36936	47.19	ug/L	97
66) 1,2-dichloropropane	11.087	63	190985	48.85	ug/L	100
67) methylcyclohexane	11.093	83	327204	54.82	ug/L	99
68) dibromomethane	11.192	93	105727	48.36	ug/L	94
69) bromodichloromethane	11.349	83	248674	49.16	ug/L	99
70) epichlorohydrin	11.673	57	62725	219.53	ug/L	99
71) cis-1,3-dichloropropene	11.804	75	306775	50.51	ug/L	99
72) 4-methyl-2-pentanone	11.914	58	204508	179.15	ug/L	97
73) 3-methyl-1-butanol	11.914	70	60378	896.44	ug/L	97
76) toluene	12.186	92	423274	48.26	ug/L	99
77) trans-1,3-dichloropropene	12.369	75	263648	50.22	ug/L	98
78) ethyl methacrylate	12.364	69	190787	47.89	ug/L	98
79) 1,1,2-trichloroethane	12.589	83	124307	48.45	ug/L	99
80) 2-hexanone	12.756	58	182889	177.15	ug/L	99
81) tetrachloroethene	12.735	166	1944136	492.23	ug/L	94
82) 1,3-dichloropropane	12.772	76	241698	48.16	ug/L	98
83) butyl acetate	12.834	56	96295	45.63	ug/L	98
84) dibromochloromethane	13.012	129	186618	49.89	ug/L	100
85) 1,2-dibromoethane	13.164	107	165107	49.31	ug/L	99
86) n-butyl ether	13.603	57	797315	51.73	ug/L	100
87) chlorobenzene	13.640	112	472705	49.58	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.708	131	186086	51.04	ug/L	97
89) ethylbenzene	13.703	91	788683	49.37	ug/L	99
90) m,p-xylene	13.823	106	614072	100.40	ug/L	97
91) o-xylene	14.220	91	634847	48.87	ug/L	99
92) styrene	14.231	104	508320	51.60	ug/L	99
93) n-amyl acetate	14.267	70	108551	48.72	ug/L	96
94) bromoform	14.456	173	112749	49.37	ug/L	99
95) butyl acrylate	14.058	55	322166	49.57	ug/L	99
96) isopropylbenzene	14.571	105	774035	49.90	ug/L	100
97) cis-1,4-dichloro-2-butene	14.607	88	62924	48.13	ug/L	97
100) bromobenzene	14.947	156	211827	49.82	ug/L	96
101) 1,1,2,2-tetrachloroethane	14.848	83	174693	47.63	ug/L	98
102) trans-1,4-dichloro-2-b...	14.885	53	42211	45.79	ug/L	92
103) 1,2,3-trichloropropene	14.932	110	43395	45.57	ug/L	99
104) n-propylbenzene	14.984	91	914840	49.45	ug/L	100
105) 2-chlorotoluene	15.110	126	199038	49.33	ug/L	96
106) 4-chlorotoluene	15.225	91	563924	49.80	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200815.d
 Acq On : 19 Feb 2020 1:59 pm
 Operator : edwardd
 Sample : JD3162-1msd Inst : Instrument #1
 Misc : MS41135,V2A8686,w,,,10
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:11:50 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
107) 1,3,5-trimethylbenzene	15.141	105	649680	50.05	ug/L	99
108) tert-butylbenzene	15.476	119	550928	50.19	ug/L	100
109) 1,2,4-trimethylbenzene	15.528	105	657770	50.70	ug/L	99
110) sec-butylbenzene	15.695	105	837296	50.28	ug/L	99
111) 1,3-dichlorobenzene	15.863	146	387070	50.35	ug/L	97
112) p-isopropyltoluene	15.826	119	709619	51.33	ug/L	99
113) benzyl chloride	16.051	91	342828	49.82	ug/L	98
114) 1,4-dichlorobenzene	15.957	146	393864	49.65	ug/L	98
115) 1,2-dichlorobenzene	16.328	146	368132	50.05	ug/L	98
116) n-butylbenzene	16.234	92	387467	52.50	ug/L	100
117) 1,2-dibromo-3-chloropr...	17.092	157	34020	47.21	ug/L	93
118) 1,3,5-trichlorobenzene	17.280	180	327809	50.36	ug/L	100
119) 1,2,4-trichlorobenzene	17.918	180	282699	52.02	ug/L	98
120) hexachlorobutadiene	18.038	225	150273	50.31	ug/L	96
121) naphthalene	18.211	128	488247	52.23	ug/L	99
122) 1,2,3-trichlorobenzene	18.441	180	245456	52.60	ug/L	99
123) hexachloroethane	16.616	201	129009	51.71	ug/L	98
124) 2-ethylhexyl acrylate	17.950	70	33557	9.10	ug/L	93
125) 2-methylnaphthalene	19.445	142	130244	29.31	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
Data File : 2a200815.d
Acq On : 19 Feb 2020 1:59 pm
Operator : edwardd
Sample : JD3162-1msd Inst : Instrument #
Misc : MS41135,V2A8686,w,,,10
ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

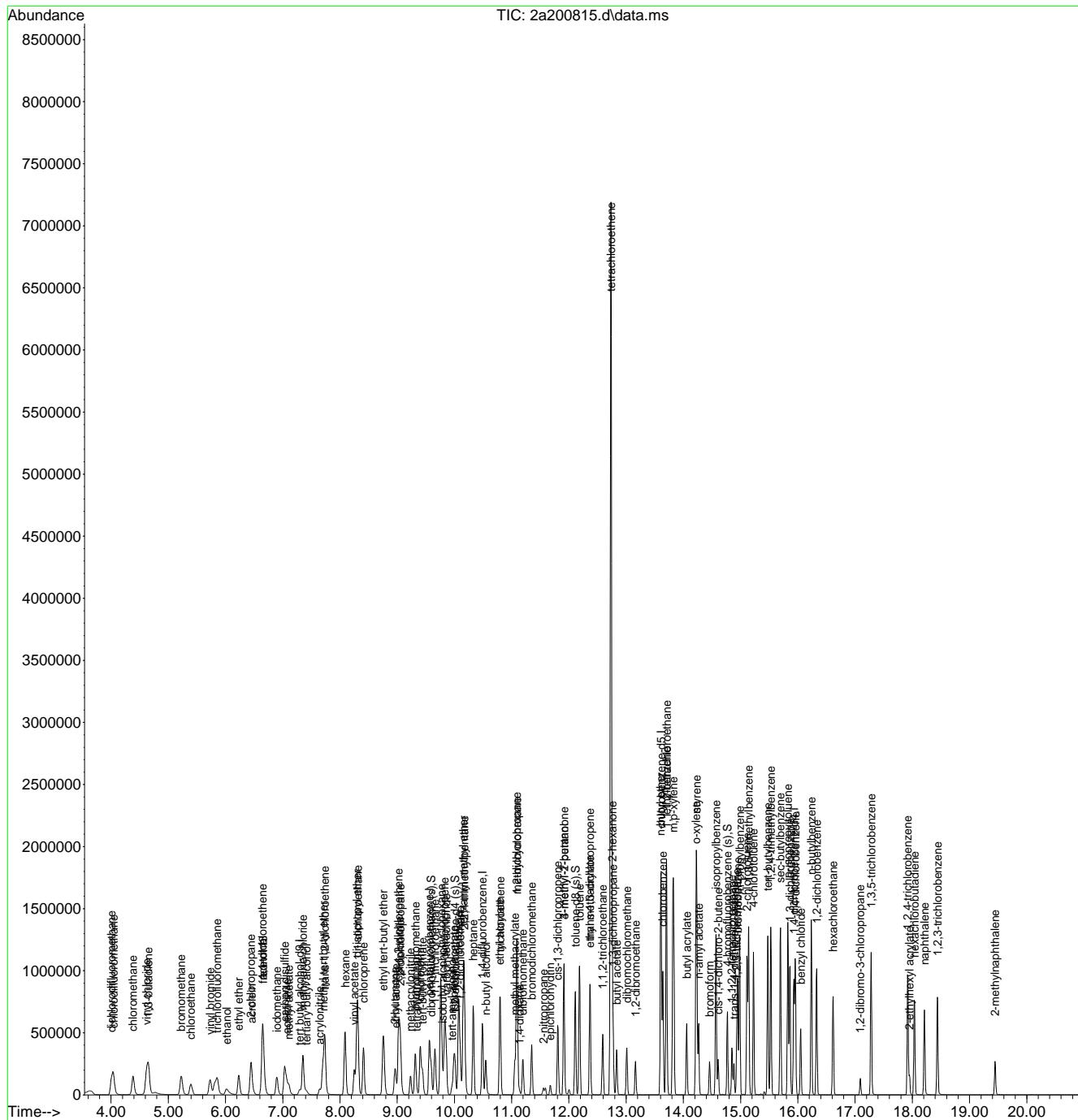
Quant Results File: M2A8671.RES

Quant Time: Feb 19 21:11:50 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

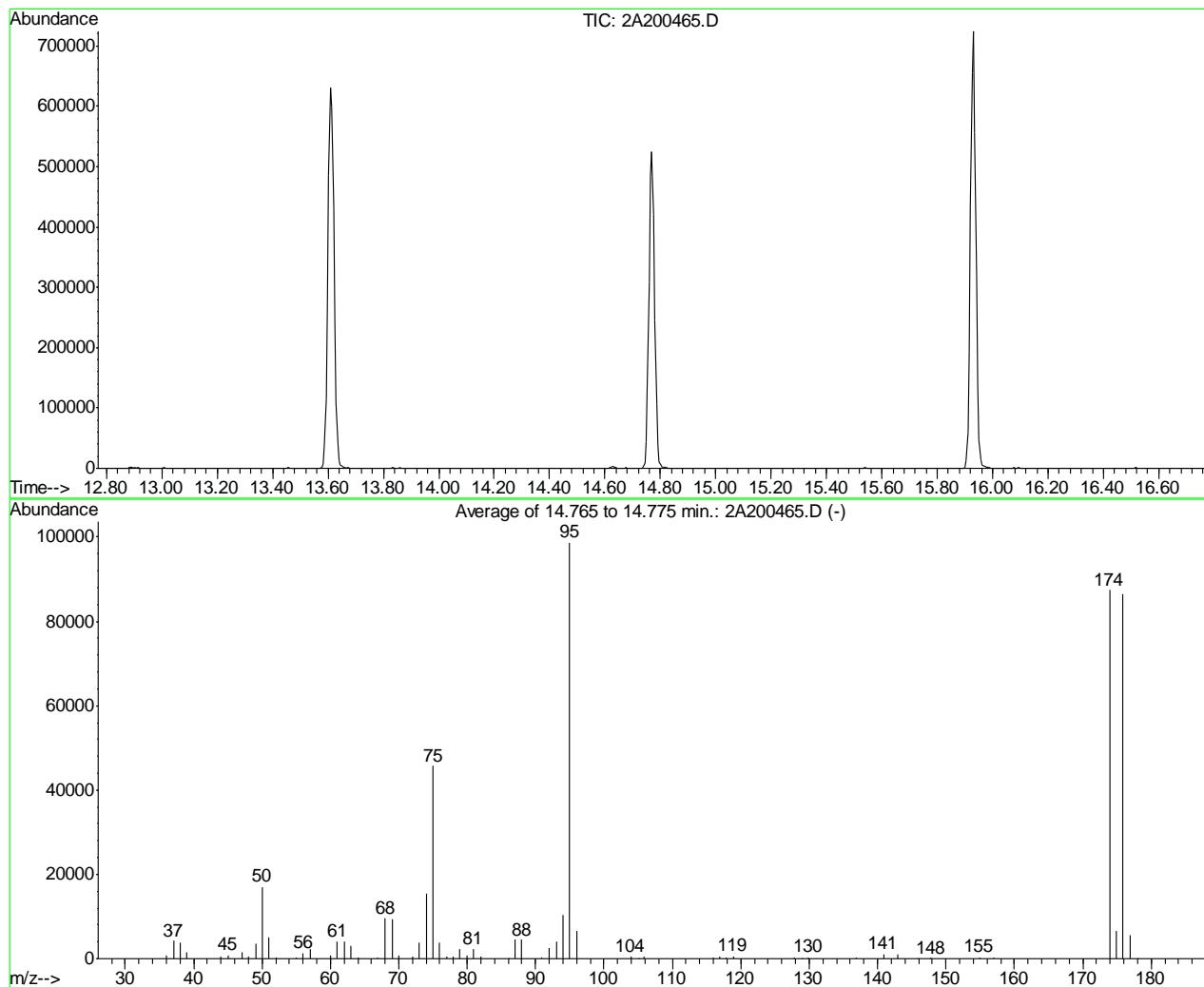
Response via : Initial Calibration



SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\V2A8671\2A200465.D Vial: 1
 Acq On : 4 Feb 2020 3:37 pm Operator: CHELSEAS
 Sample : BFB Inst : Instrumen
 Misc : MS40388,V2A8671,w,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 09:46:56 2020



AutoFind: Scans 2148, 2149, 2150; Background Corrected with Scan 2140

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.3	17057	PASS
75	95	30	60	46.3	45730	PASS
95	95	100	100	100.0	98709	PASS
96	95	5	9	6.8	6674	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	88.6	87456	PASS
175	174	5	9	7.6	6650	PASS
176	174	95	101	98.9	86488	PASS
177	176	5	9	6.5	5598	PASS

Average of 14.765 to 14.775 min.: 2A200465.D

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	841	52.00	161	69.00	9247	80.90	2297
37.05	4268	55.00	245	70.00	650	81.95	482
38.05	3858	56.00	1289	72.00	434	86.00	76
39.05	1505	57.00	2292	73.00	3827	87.00	4486
44.00	589	60.00	721	74.00	15409	88.00	4507
45.05	801	61.00	4155	75.00	45730	90.95	374
47.05	1474	62.00	3974	76.00	3737	92.00	2487
48.05	605	63.05	3107	77.00	540	93.00	3981
49.05	3470	64.00	274	77.90	488	94.00	10491
50.00	17057	66.95	248	78.90	2403	95.00	98709
51.05	4954	68.00	9539	79.95	726	96.00	6674

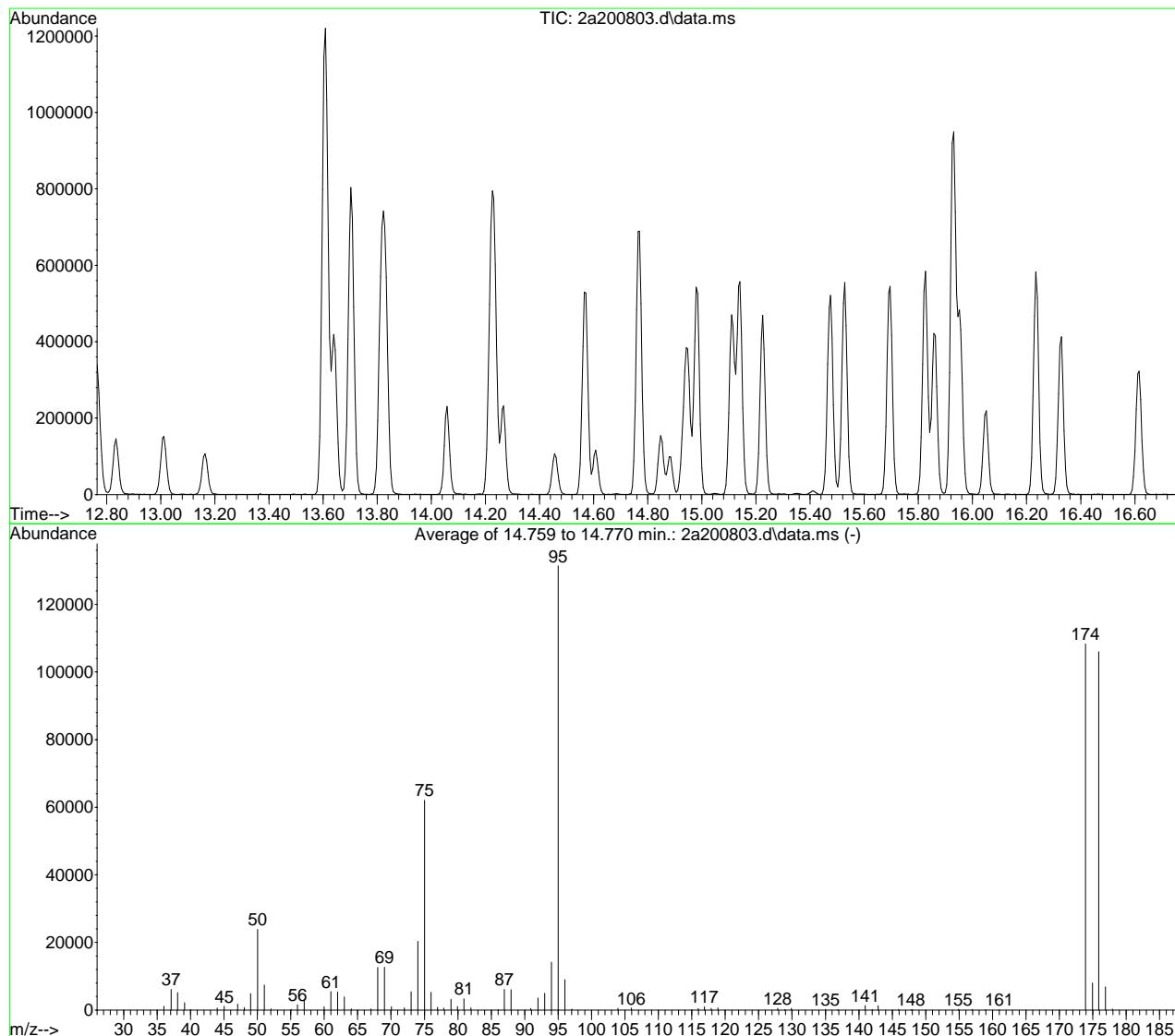
Average of 14.765 to 14.775 min.: 2A200465.D

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
103.95	492	140.90	1021				
105.00	75	142.90	959				
105.90	432	145.90	93				
115.95	373	147.85	168				
116.95	521	154.95	280				
117.85	348	156.90	177				
118.90	575	173.90	87456				
127.85	364	174.90	6650				
128.90	78	175.90	86488				
129.90	373	176.90	5598				
136.80	140	178.00	86				

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ni...20\v2a8686\2a200803.d Vial: 2
 Acq On : 19 Feb 2020 7:12 am Operator: edwardd
 Sample : bfb Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p
 Method : C:\MSDCHEM\1\METHODS\M2A8671.M (RTE Integrator)
 Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020



AutoFind: Scans 2147, 2148, 2149; Background Corrected with Scan 2140

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	23824	PASS
75	95	30	60	47.2	62053	PASS
95	95	100	100	100.0	131405	PASS
96	95	5	9	6.9	9039	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	82.4	108331	PASS
175	174	5	9	7.4	8035	PASS
176	174	95	101	97.8	105995	PASS
177	176	5	9	6.5	6895	PASS

Average of 14.759 to 14.770 min.: 2a200803.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1149	51.05	7364	68.00	12567	79.95	1005
37.10	6058	52.05	343	69.00	12676	80.90	3313
38.05	5214	55.05	174	70.05	928	81.95	646
39.10	2195	56.00	1574	72.00	690	86.00	144
39.95	3	57.00	3100	73.00	5393	86.95	6072
44.00	566	60.00	974	74.00	20344	87.95	5991
45.05	1090	61.00	5510	75.00	62053	90.90	423
47.05	1721	62.00	5334	76.00	5270	92.00	3547
48.05	722	63.00	3853	76.95	785	93.00	4922
49.00	4855	64.05	376	77.90	576	94.00	14149
50.05	23824	67.00	319	78.95	3196	95.00	131405

Average of 14.759 to 14.770 min.: 2a200803.d\data.ms

bfb

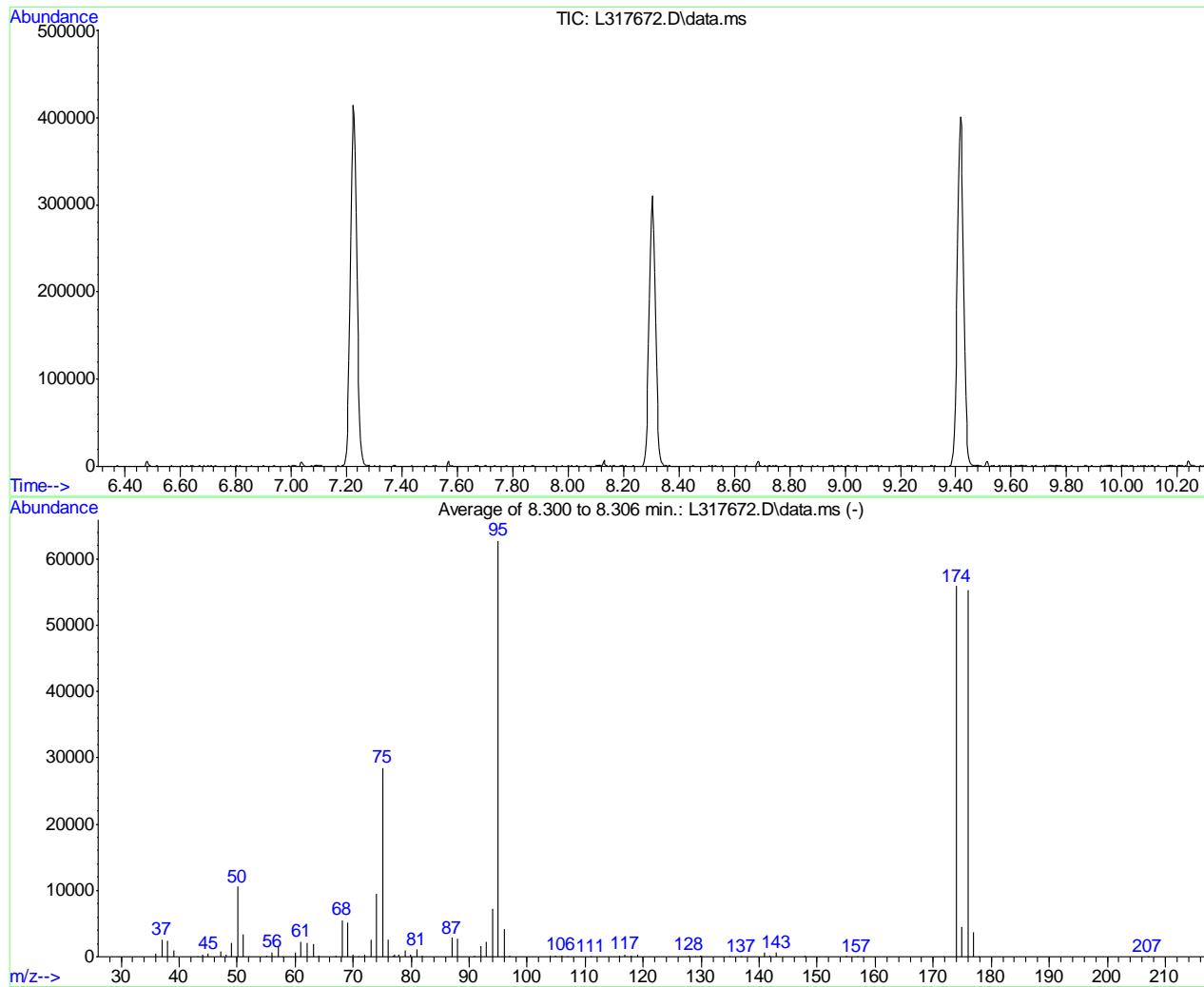
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	9039	129.90	465	158.90	69		
97.05	283	135.00	198	161.00	69		
103.95	464	136.85	158	173.90	108331		
105.95	552	140.95	1334	174.95	8035		
115.00	118	142.00	85	175.90	105995		
115.95	443	142.90	1266	176.90	6895		
116.90	940	145.90	85	177.95	247		
117.90	515	147.80	138				
118.90	629	148.00	86				
127.85	504	154.90	206				
128.90	96	156.95	160				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VL9325\L317672.D Vial: 3
 Acq On : 20 Nov 2019 3:51 pm Operator: roberts
 Sample : bfb Inst : GCMSL
 Misc : MS39191,VL9325,,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um



AutoFind: Scans 2123, 2124, 2125; Background Corrected with Scan 2110

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	10571	PASS
75	95	30	60	45.4	28501	PASS
95	95	100	100	100.0	62744	PASS
96	95	5	9	6.7	4181	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	89.0	55859	PASS
175	174	5	9	8.0	4489	PASS
176	174	95	101	99.1	55339	PASS
177	176	5	9	6.7	3731	PASS

Average of 8.300 to 8.306 min.: L317672.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	507	51.10	3440	67.05	208	77.05	293
37.05	2659	52.00	80	68.05	5488	77.90	282
38.05	2409	55.05	178	69.05	5135	78.95	1049
39.05	924	56.05	698	70.00	370	79.95	312
43.20	39	57.05	1544	70.80	44	80.95	1075
44.00	385	57.90	68	72.05	303	82.00	198
45.05	475	60.05	572	73.10	2616	87.00	2876
47.10	781	61.00	2307	74.05	9468	88.00	2673
48.15	293	62.05	2056	75.05	28501	91.00	154
49.10	2108	63.10	1872	76.05	2517	92.05	1553
50.10	10571	64.00	209	76.90	119	93.00	2266

Average of 8.300 to 8.306 min.: L317672.D\data.ms

bfb

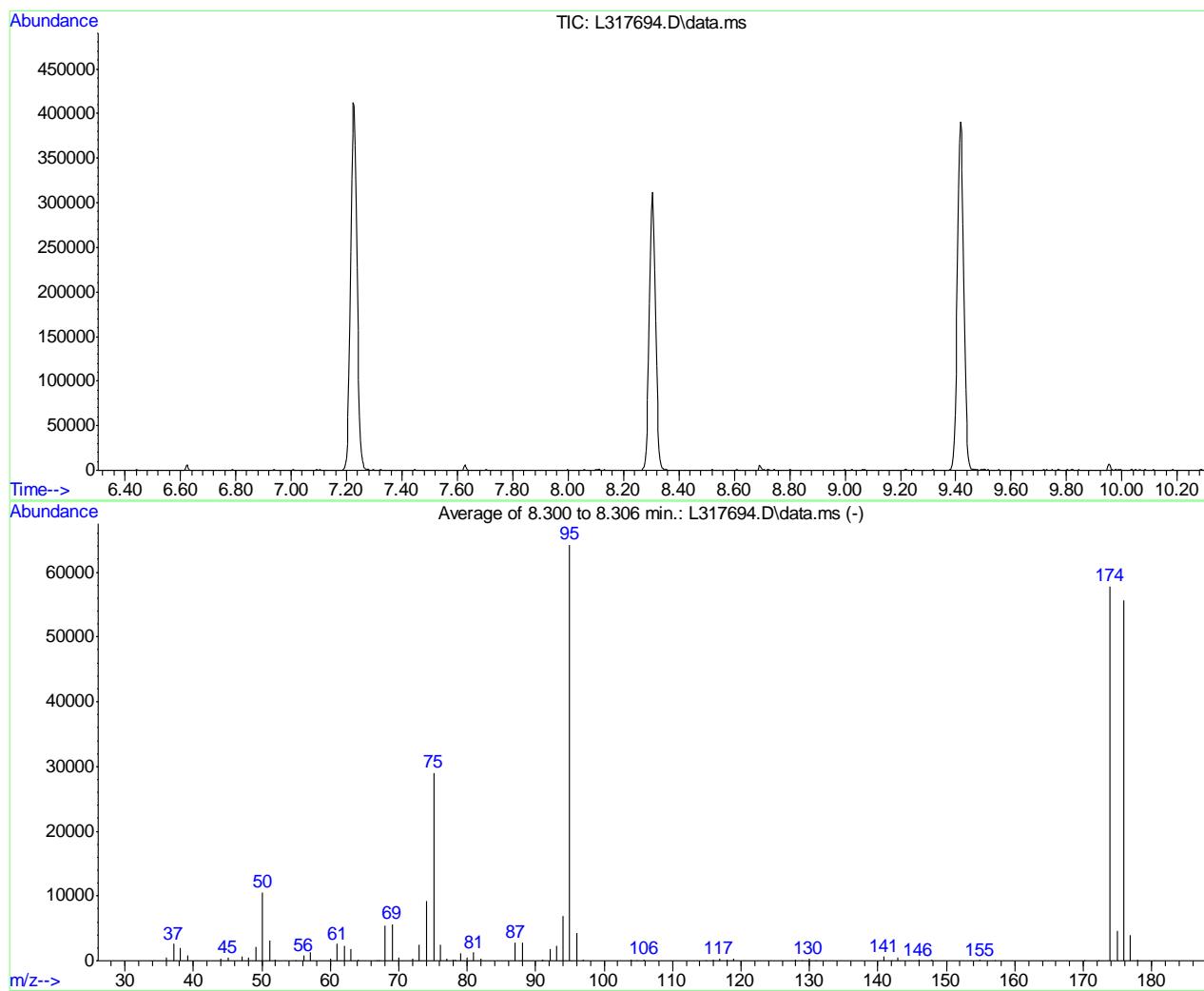
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	7181	117.90	215	147.85	168		
95.00	62744	118.95	263	154.80	43		
96.05	4181	127.90	181	155.00	60		
97.00	98	128.90	41	156.90	81		
103.90	202	129.80	160	171.80	45		
104.95	112	130.00	112	174.00	55859		
105.90	213	134.90	42	174.95	4489		
106.90	39	136.95	80	175.95	55339		
111.00	41	140.95	577	176.95	3731		
115.95	211	141.90	100	177.80	72		
116.90	337	142.95	615	207.00	84		

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VL9325\L317694.D Vial: 8
 Acq On : 21 Nov 2019 7:11 pm Operator: brittank
 Sample : bfb2 Inst : GCMSL
 Misc : MS39191,VL9325,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um



AutoFind: Scans 2123, 2124, 2125; Background Corrected with Scan 2111

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	10624	PASS
75	95	30	60	45.1	29000	PASS
95	95	100	100	100.0	64288	PASS
96	95	5	9	6.8	4354	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	89.9	57800	PASS
175	174	5	9	7.9	4588	PASS
176	174	95	101	96.3	55637	PASS
177	176	5	9	7.1	3963	PASS

Average of 8.300 to 8.306 min.: L317694.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	521	52.00	173	68.05	5471	79.00	1094
37.10	2566	54.95	83	69.05	5624	79.95	449
38.10	2004	56.10	780	70.00	443	80.95	1245
39.10	851	57.05	1386	72.05	300	81.95	304
44.00	272	60.05	397	73.00	2426	87.00	2885
45.05	493	61.05	2616	74.10	9289	88.00	2787
47.05	666	62.05	2299	75.10	29000	90.90	68
48.05	424	63.05	1893	76.05	2557	91.10	206
49.10	2168	64.10	161	77.05	410	92.05	1850
50.10	10624	66.80	46	78.00	99	93.00	2341
51.10	3157	67.10	50	78.20	98	94.05	6980

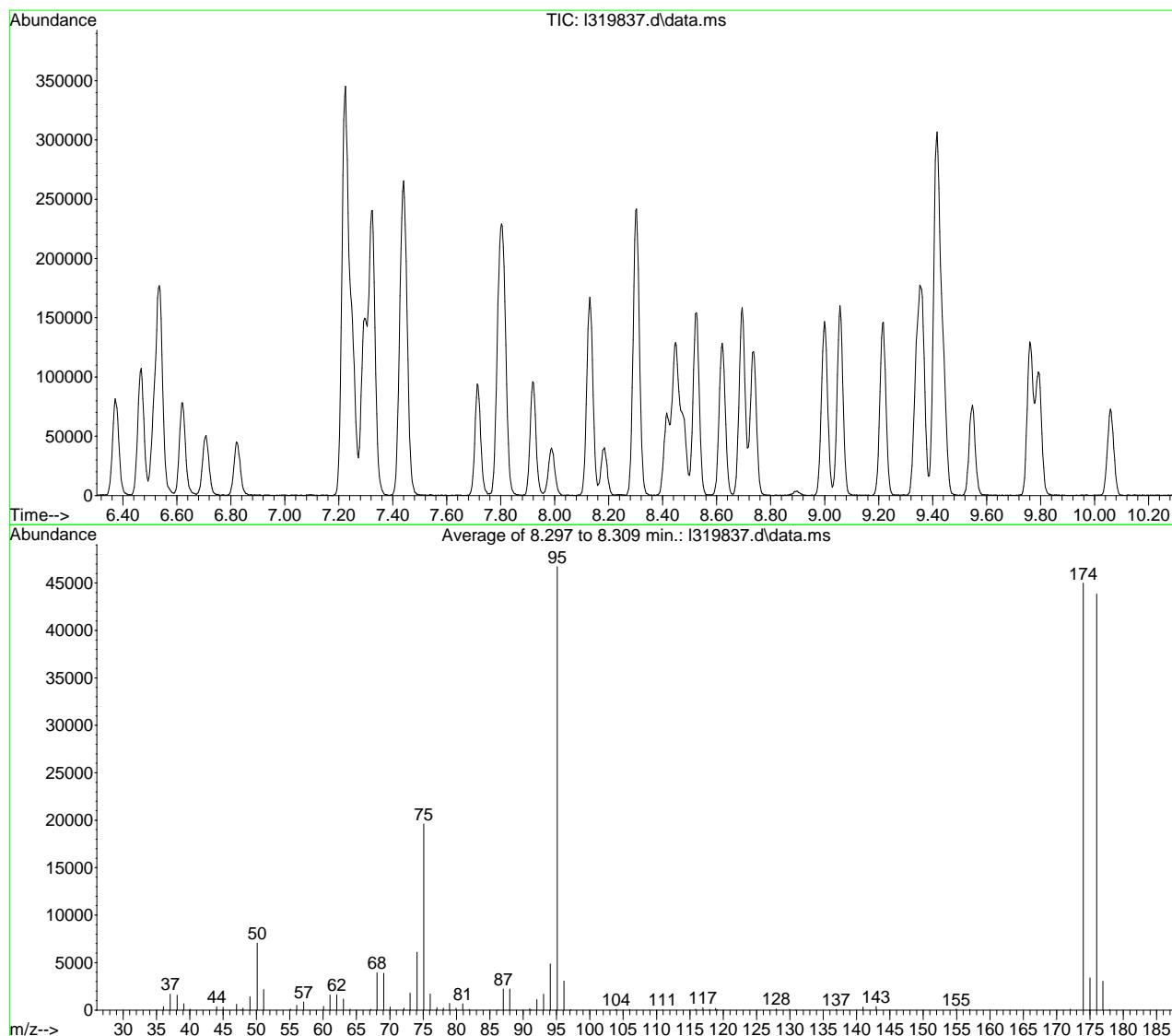
Average of 8.300 to 8.306 min.: L317694.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	64288	128.00	118	170.10	36		
96.05	4354	128.80	74	172.20	59		
96.90	110	129.95	272	173.95	57800		
103.95	176	130.90	41	174.95	4588		
104.75	71	140.90	643	175.95	55637		
105.85	200	142.00	38	176.90	3963		
114.90	34	142.85	546	177.90	101		
115.95	128	145.95	99				
116.85	329	147.95	96				
117.95	220	154.95	151				
118.90	299	157.00	43				

SW-846 Method 8260
 Data File : C:\msdchem\1\data\kr...2020\vl9424\1319837.d Vial: 2
 Acq On : 18 Feb 2020 6:51 am Operator: edwardd
 Sample : bfb Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p
 Method : C:\MSDCHEM\1\METHODS\ML9325.M (RTE Integrator)
 Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um



Spectrum Information: Average of 8.297 to 8.309 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	7077	PASS
75	95	30	60	42.0	19625	PASS
95	95	100	100	100.0	46712	PASS
96	95	5	9	6.6	3067	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.3	44992	PASS
175	174	5	9	7.5	3384	PASS
176	174	95	101	97.4	43830	PASS
177	176	5	9	6.9	3045	PASS

Average of 8.297 to 8.309 min.: 1319837.d\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	378.4	50.10	7077.4	68.10	3943.2	79.95	214.2
37.05	1663	51.10	2168.6	69.10	3878	80.95	656
38.10	1563.8	55.10	102.6	70.05	318.8	81.90	73.2
39.10	658.6	56.05	513.6	72.10	209	86.30	20.4
40.05	87.6	57.10	861.8	73.05	1778.4	87.00	2220.4
44.05	333	60.05	386.8	74.10	6093.8	88.00	2217.8
45.00	322.2	61.05	1581.4	75.10	19625.2	90.95	148.6
47.00	616.2	62.05	1582.4	76.05	1714.2	91.20	23.6
47.70	32.8	63.05	1170.4	77.05	267.4	92.05	1110.2
48.00	212.2	64.05	95.6	78.05	216.4	93.05	1671.8
49.05	1398.6	67.15	76.6	78.95	705.4	94.05	4846.4

Average of 8.297 to 8.309 min.: 1319837.d\data.ms
bfb

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.10	46712	127.95	110.8	176.00	43830.4		
96.10	3066.8	129.95	72	176.95	3045		
97.15	42.6	130.90	21.4	177.95	48.4		
103.95	75.2	136.95	72.2				
105.95	64.4	140.95	312				
110.90	20.8	142.95	372				
115.85	92.4	154.95	96.8				
116.95	269	157.00	77.2				
117.95	63.4	172.05	87.6				
118.85	166	174.00	44992				
119.10	46.4	175.00	3384.2				

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200466.D
 Acq On : 4 Feb 2020 4:12 pm
 Operator : CHELSEAS
 Sample : IC8671-0.2
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 06 10:37:59 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:46:28 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	70091	500.00	ug/L	0.00
5) pentafluorobenzene	9.57	168	235657	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	352000	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	308321	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	157267	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.60	113	107388	50.25	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.50%	
53) 1,2-dichloroethane-d4 (s)	10.02	65	117497	50.58	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 101.16%	
75) toluene-d8 (s)	12.11	98	382638	48.82	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 97.64%	
99) 4-bromofluorobenzene (s)	14.77	95	147437	49.54	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.08%	

Target Compounds

				Qvalue
26) methyl tert butyl ether	7.71	73	1194	0.18 ug/L 54
29) di-isopropyl ether	8.30	45	1773	0.19 ug/L 75
30) ethyl tert-butyl ether	8.76	59	1693	0.20 ug/L 92
42) chloroform	9.40	83	988	0.21 ug/L 73
55) tert-amyl methyl ether	10.17	73	1508	0.19 ug/L # 51
57) benzene	10.08	78	2004	0.19 ug/L 81
69) bromodichloromethane	11.35	83	683	0.18 ug/L 78
76) toluene	12.19	92	1282	0.20 ug/L 88
77) trans-1,3-dichloropropene	12.38	75	744	0.18 ug/L # 51
86) n-butyl ether	13.61	57	2009	0.17 ug/L # 1
87) chlorobenzene	13.65	112	1260	0.18 ug/L 89
89) ethylbenzene	13.71	91	2108	0.18 ug/L 90
90) m,p-xylene	13.83	106	1551	0.34 ug/L 100
91) o-xylene	14.23	91	1915	0.20 ug/L 100
92) styrene	14.25	104	1191	0.16 ug/L 86
96) isopropylbenzene	14.57	105	2080	0.18 ug/L 95
100) bromobenzene	14.95	156	538	0.17 ug/L # 72
104) n-propylbenzene	14.98	91	2592	0.19 ug/L 97
106) 4-chlorotoluene	15.23	91	1450	0.18 ug/L 88
107) 1,3,5-trimethylbenzene	15.15	105	1733	0.18 ug/L 92
108) tert-butylbenzene	15.48	119	1364	0.16 ug/L 90
109) 1,2,4-trimethylbenzene	15.53	105	1710	0.18 ug/L 70
110) sec-butylbenzene	15.70	105	2285	0.18 ug/L 92
111) 1,3-dichlorobenzene	15.87	146	967	0.17 ug/L # 74
112) p-isopropyltoluene	15.83	119	1797	0.17 ug/L 94
114) 1,4-dichlorobenzene	15.96	146	1192	0.21 ug/L 92
115) 1,2-dichlorobenzene	16.33	146	881	0.16 ug/L 97
116) n-butylbenzene	16.24	92	960	0.17 ug/L # 80
118) 1,3,5-trichlorobenzene	17.28	180	762	0.15 ug/L # 76
119) 1,2,4-trichlorobenzene	17.92	180	725	0.17 ug/L # 73
120) hexachlorobutadiene	18.04	225	365	0.16 ug/L # 55
122) 1,2,3-trichlorobenzene	18.44	180	618	0.17 ug/L # 62

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200466.D
Acq On : 4 Feb 2020 4:12 pm
Operator : CHELSEAS
Sample : IC8671-0.2
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 06 10:37:59 2020
Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M
Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:46:28 2020
QLast Update : Wed Feb 05 07:47:36 2020
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200466.D
 Acq On : 4 Feb 2020 4:12 pm
 Operator : CHELSEAS
 Sample : IC8671-0.2
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 2 Sample Multiplier: 1

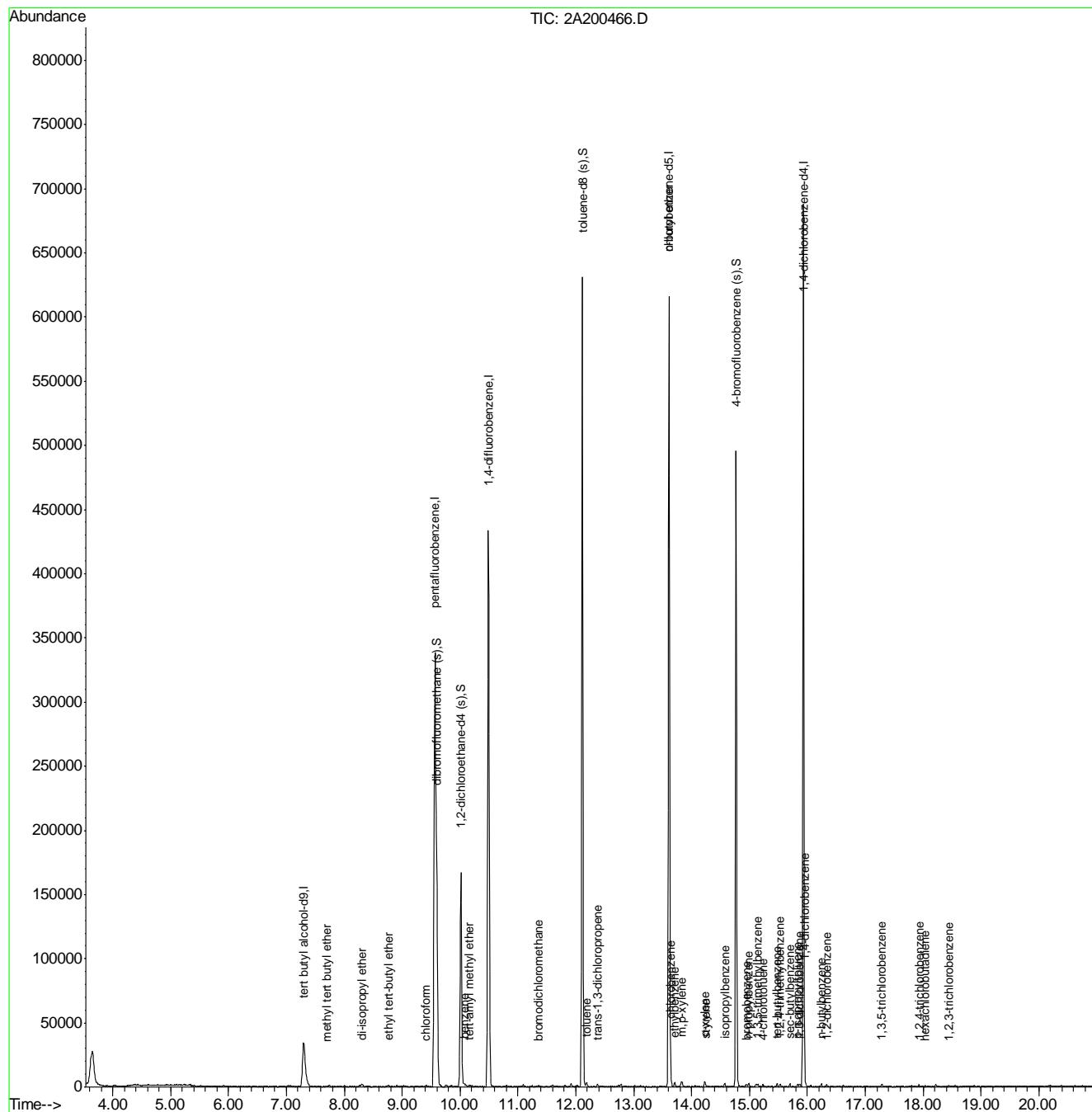
Quant Time: Feb 06 10:37:59 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:46:28 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200467.D
 Acq On : 4 Feb 2020 4:41 pm
 Operator : CHELSEAS
 Sample : IC8671-0.5
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 06 10:39:22 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	69786	500.00	ug/L	0.00
5) pentafluorobenzene	9.57	168	233962	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	350226	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	300716	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	154091	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	106514	50.20	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.40%	
53) 1,2-dichloroethane-d4 (s)	10.02	65	116432	50.37	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 100.74%	
75) toluene-d8 (s)	12.11	98	379626	49.66	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.32%	
99) 4-bromofluorobenzene (s)	14.77	95	144333	49.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.00%	

Target Compounds

				Qvalue
6) chlorodifluoromethane	4.05	51	1534	0.47 ug/L 65
8) chloromethane	4.39	50	2113	0.51 ug/L 92
9) vinyl chloride	4.63	62	1802	0.44 ug/L 68
12) chloroethane	5.41	64	1072	0.51 ug/L 47
13) vinyl bromide	5.74	106	895	0.40 ug/L 92
19) 1,1-dichloroethene	6.66	96	923	0.40 ug/L # 68
24) methylene chloride	7.36	84	1330	0.50 ug/L 89
26) methyl tert butyl ether	7.71	73	3101	0.47 ug/L 77
27) trans-1,2-dichloroethene	7.75	96	1160	0.46 ug/L 91
29) di-isopropyl ether	8.30	45	4498	0.48 ug/L 86
30) ethyl tert-butyl ether	8.76	59	4115	0.49 ug/L 95
32) 1,1-dichloroethane	8.32	63	2431	0.50 ug/L 83
33) chloroprene	8.42	53	1766	0.44 ug/L 97
37) 2,2-dichloropropane	9.06	77	1955	0.52 ug/L 82
42) chloroform	9.41	83	2192	0.46 ug/L 90
47) 1,1,1-trichloroethane	9.66	97	1898	0.45 ug/L 91
49) 1,1-dichloropropene	9.84	75	1792	0.49 ug/L # 76
55) tert-amyl methyl ether	10.16	73	3749	0.47 ug/L 92
57) benzene	10.07	78	5688	0.55 ug/L 92
60) 1,2-dichloroethane	10.10	62	1989	0.56 ug/L 86
61) trichloroethene	10.79	95	1280	0.47 ug/L 78
64) 2-chloroethyl vinyl ether	11.59	63	2518	2.00 ug/L 83
66) 1,2-dichloropropane	11.09	63	1296	0.45 ug/L 90
69) bromodichloromethane	11.35	83	1695	0.45 ug/L 93
71) cis-1,3-dichloropropene	11.81	75	1944	0.43 ug/L 92
72) 4-methyl-2-pentanone	11.91	58	1525	1.82 ug/L # 79
76) toluene	12.19	92	3196	0.51 ug/L 89
77) trans-1,3-dichloropropene	12.37	75	1682	0.43 ug/L 84
79) 1,1,2-trichloroethane	12.59	83	851	0.45 ug/L 90
81) tetrachloroethene	12.74	166	1359	0.48 ug/L 95
82) 1,3-dichloropropane	12.78	76	1682	0.46 ug/L 87
84) dibromochloromethane	13.01	129	1326	0.47 ug/L 97
85) 1,2-dibromoethane	13.17	107	1075	0.42 ug/L 81

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200467.D
 Acq On : 4 Feb 2020 4:41 pm
 Operator : CHELSEAS
 Sample : IC8671-0.5
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 06 10:39:22 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
86) n-butyl ether	13.61	57	5101	0.44	ug/L	# 1
87) chlorobenzene	13.65	112	3445	0.49	ug/L	98
88) 1,1,1,2-tetrachloroethane	13.71	131	1260	0.47	ug/L	97
89) ethylbenzene	13.70	91	5974	0.52	ug/L	98
90) m,p-xylene	13.82	106	4497	1.00	ug/L	96
91) o-xylene	14.22	91	4739	0.51	ug/L	97
92) styrene	14.24	104	3402	0.46	ug/L	97
94) bromoform	14.46	173	762	0.43	ug/L	93
96) isopropylbenzene	14.57	105	5569	0.49	ug/L	94
100) bromobenzene	14.95	156	1501	0.48	ug/L	# 81
101) 1,1,2,2-tetrachloroethane	14.85	83	1133	0.42	ug/L	84
104) n-propylbenzene	14.98	91	6467	0.49	ug/L	94
105) 2-chlorotoluene	15.11	126	1338	0.46	ug/L	98
106) 4-chlorotoluene	15.22	91	4019	0.50	ug/L	82
107) 1,3,5-trimethylbenzene	15.14	105	4446	0.47	ug/L	82
108) tert-butylbenzene	15.48	119	3814	0.47	ug/L	93
109) 1,2,4-trimethylbenzene	15.53	105	4375	0.46	ug/L	86
110) sec-butylbenzene	15.70	105	5715	0.47	ug/L	95
111) 1,3-dichlorobenzene	15.86	146	2712	0.48	ug/L	92
112) p-isopropyltoluene	15.83	119	4649	0.45	ug/L	98
113) benzyl chloride	16.05	91	2258	0.44	ug/L	95
114) 1,4-dichlorobenzene	15.96	146	2835	0.50	ug/L	96
115) 1,2-dichlorobenzene	16.33	146	2660	0.50	ug/L	84
116) n-butylbenzene	16.24	92	2465	0.45	ug/L	99
118) 1,3,5-trichlorobenzene	17.28	180	2163	0.44	ug/L	85
119) 1,2,4-trichlorobenzene	17.92	180	1587	0.38	ug/L	89
120) hexachlorobutadiene	18.04	225	1004	0.45	ug/L	87
121) naphthalene	18.21	128	2735	0.37	ug/L	85
122) 1,2,3-trichlorobenzene	18.44	180	1584	0.44	ug/L	92
123) hexachloroethane	16.61	201	757	0.40	ug/L	# 89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200467.D
 Acq On : 4 Feb 2020 4:41 pm
 Operator : CHELSEAS
 Sample : IC8671-0.5
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 3 Sample Multiplier: 1

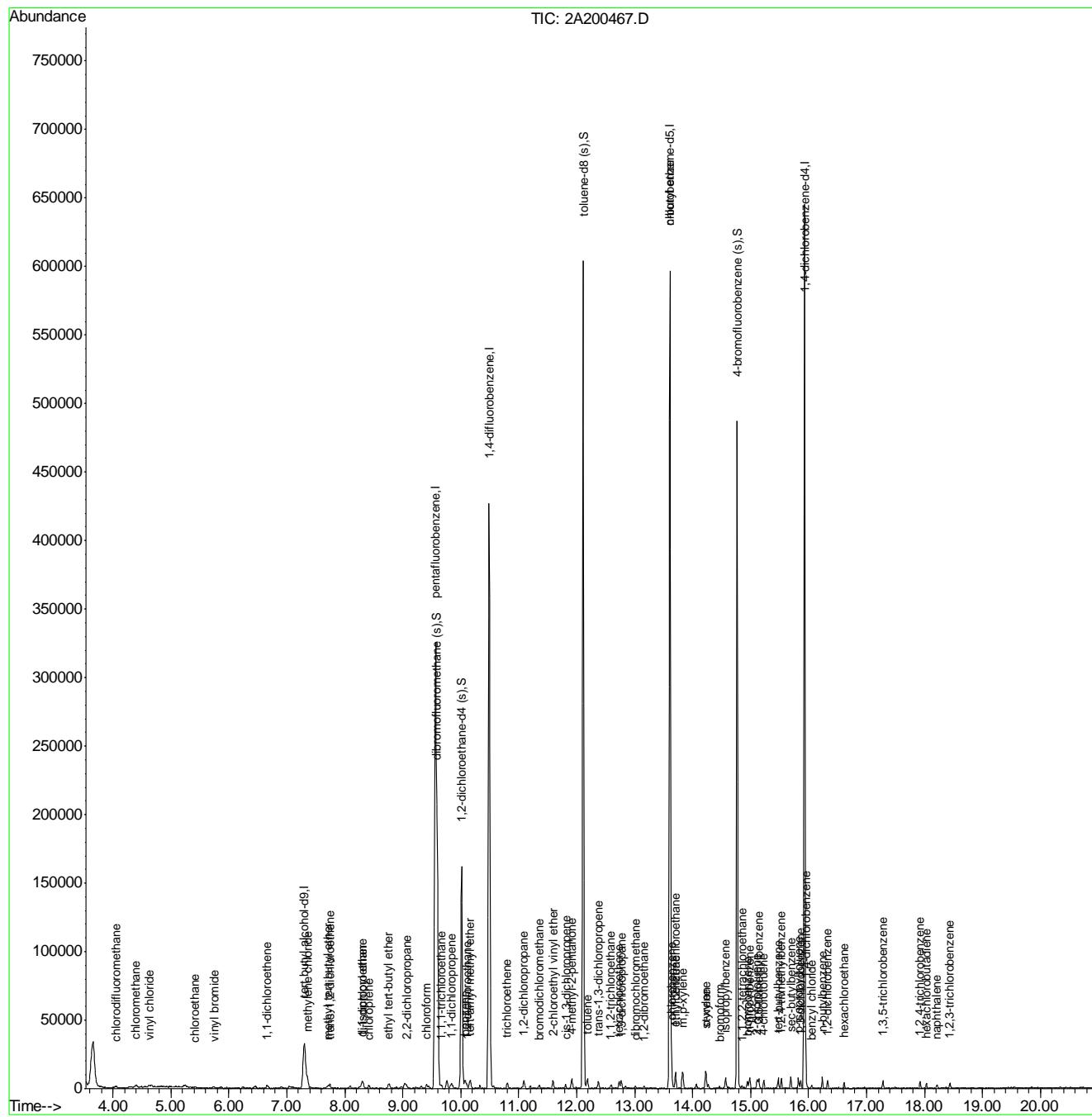
Quant Time: Feb 06 10:39:22 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200468.D
 Acq On : 4 Feb 2020 5:09 pm
 Operator : CHELSEAS
 Sample : IC8671-1
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 06 10:41:01 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	69939	500.00	ug/L	0.00
5) pentafluorobenzene	9.57	168	235904	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	348368	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	301936	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	155350	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	106877	49.96	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.92%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	116707	50.76	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 101.52%	
75) toluene-d8 (s)	12.11	98	382382	49.82	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.64%	
99) 4-bromofluorobenzene (s)	14.77	95	146338	49.78	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.56%	

Target Compounds

				Qvalue	
2) ethanol	6.03	45	1607	75.71	ug/L # 38
6) chlorodifluoromethane	4.05	51	3301	1.00	ug/L 87
7) dichlorodifluoromethane	4.02	85	2342	0.63	ug/L 90
8) chloromethane	4.39	50	4678	1.11	ug/L 82
9) vinyl chloride	4.62	62	4077	0.99	ug/L 90
10) 1,3-butadiene	4.66	54	2167	0.91	ug/L 94
11) bromomethane	5.22	94	3257	1.28	ug/L 71
12) chloroethane	5.40	64	2035	0.97	ug/L 75
13) vinyl bromide	5.74	106	1930	0.86	ug/L 75
15) ethyl ether	6.23	74	1322	0.93	ug/L 89
19) 1,1-dichloroethene	6.65	96	2224	0.95	ug/L # 79
20) acetone	6.66	43	1969	3.58	ug/L 89
22) iodomethane	6.89	142	3325	0.95	ug/L 95
24) methylene chloride	7.35	84	2747	1.02	ug/L 85
26) methyl tert butyl ether	7.71	73	6799	1.01	ug/L 98
27) trans-1,2-dichloroethene	7.74	96	2691	1.05	ug/L # 76
28) hexane	8.09	57	2862	0.70	ug/L 94
29) di-isopropyl ether	8.30	45	9564	1.02	ug/L 95
30) ethyl tert-butyl ether	8.75	59	8560	1.01	ug/L 97
32) 1,1-dichloroethane	8.32	63	5074	1.04	ug/L 92
33) chloroprene	8.41	53	3810	0.94	ug/L 99
37) 2,2-dichloropropane	9.04	77	3655	0.96	ug/L 95
38) cis-1,2-dichloroethene	9.03	96	2778	0.95	ug/L 92
39) propionitrile	9.04	54	2081	8.14	ug/L 83
40) bromochloromethane	9.31	130	1607	0.87	ug/L 92
42) chloroform	9.41	83	4794	1.01	ug/L 98
47) 1,1,1-trichloroethane	9.65	97	4030	0.95	ug/L 86
49) 1,1-dichloropropene	9.83	75	3430	0.93	ug/L 93
51) carbon tetrachloride	9.85	117	3585	0.94	ug/L # 82
54) 2,2,4-trimethylpentane	10.17	57	8045	0.77	ug/L 92
55) tert-amyl methyl ether	10.16	73	7915	1.00	ug/L 97
57) benzene	10.08	78	10404	1.01	ug/L 96
58) heptane	10.33	57	1615	0.72	ug/L 86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200468.D
 Acq On : 4 Feb 2020 5:09 pm
 Operator : CHELSEAS
 Sample : IC8671-1
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 06 10:41:01 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
60) 1,2-dichloroethane	10.10	62	3758	1.07	ug/L	85
61) trichloroethene	10.80	95	2669	0.98	ug/L	90
62) ethyl acrylate	10.79	55	2399	0.81	ug/L	81
64) 2-chloroethyl vinyl ether	11.59	63	5785	4.62	ug/L	96
66) 1,2-dichloropropane	11.09	63	2794	0.97	ug/L	98
67) methylcyclohexane	11.09	83	3283	0.71	ug/L	98
68) dibromomethane	11.20	93	1384	0.86	ug/L	84
69) bromodichloromethane	11.35	83	3649	0.98	ug/L	92
71) cis-1,3-dichloropropene	11.81	75	4091	0.90	ug/L	96
72) 4-methyl-2-pentanone	11.91	58	3233	3.87	ug/L #	83
76) toluene	12.19	92	6519	1.04	ug/L	91
77) trans-1,3-dichloropropene	12.38	75	3532	0.89	ug/L	99
78) ethyl methacrylate	12.36	69	2465	0.82	ug/L	95
79) 1,1,2-trichloroethane	12.59	83	1648	0.87	ug/L	92
80) 2-hexanone	12.76	58	2656	3.44	ug/L #	87
81) tetrachloroethene	12.73	166	2897	1.01	ug/L	93
82) 1,3-dichloropropane	12.77	76	3659	1.00	ug/L	93
84) dibromochloromethane	13.01	129	2476	0.88	ug/L	96
85) 1,2-dibromoethane	13.16	107	2151	0.85	ug/L	94
86) n-butyl ether	13.60	57	11071	0.95	ug/L #	59
87) chlorobenzene	13.64	112	7046	1.01	ug/L	96
88) 1,1,1,2-tetrachloroethane	13.71	131	2410	0.89	ug/L	92
89) ethylbenzene	13.70	91	12119	1.05	ug/L	95
90) m,p-xylene	13.82	106	8578	1.89	ug/L	99
91) o-xylene	14.22	91	9272	0.99	ug/L	98
92) styrene	14.24	104	6921	0.93	ug/L	98
93) n-amyl acetate	14.27	70	1329	0.79	ug/L #	81
94) bromoform	14.46	173	1437	0.82	ug/L	94
95) butyl acrylate	14.06	55	4050	0.81	ug/L	85
96) isopropylbenzene	14.57	105	11473	1.01	ug/L	99
100) bromobenzene	14.95	156	2800	0.90	ug/L	95
101) 1,1,2,2-tetrachloroethane	14.85	83	2450	0.90	ug/L	96
104) n-propylbenzene	14.98	91	13377	1.00	ug/L	98
105) 2-chlorotoluene	15.11	126	2869	0.98	ug/L	97
106) 4-chlorotoluene	15.22	91	8209	1.00	ug/L	98
107) 1,3,5-trimethylbenzene	15.14	105	9122	0.95	ug/L	96
108) tert-butylbenzene	15.48	119	7908	0.97	ug/L	86
109) 1,2,4-trimethylbenzene	15.53	105	8959	0.94	ug/L	96
110) sec-butylbenzene	15.70	105	11871	0.97	ug/L	96
111) 1,3-dichlorobenzene	15.86	146	5453	0.97	ug/L	98
112) p-isopropyltoluene	15.83	119	9771	0.95	ug/L	98
113) benzyl chloride	16.05	91	4552	0.88	ug/L	93
114) 1,4-dichlorobenzene	15.95	146	5569	0.98	ug/L	100
115) 1,2-dichlorobenzene	16.33	146	5161	0.96	ug/L	95
116) n-butylbenzene	16.23	92	5036	0.91	ug/L	92
117) 1,2-dibromo-3-chloropropan	17.10	157	443	0.80	ug/L	82
118) 1,3,5-trichlorobenzene	17.28	180	4446	0.89	ug/L	95
119) 1,2,4-trichlorobenzene	17.92	180	3538	0.84	ug/L	92
120) hexachlorobutadiene	18.03	225	2066	0.91	ug/L	93
121) naphthalene	18.21	128	5876	0.79	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200468.D
Acq On : 4 Feb 2020 5:09 pm
Operator : CHELSEAS
Sample : IC8671-1
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Feb 06 10:41:01 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
122) 1,2,3-trichlorobenzene	18.45	180	3116	0.86	ug/L	80
123) hexachloroethane	16.62	201	1666	0.87	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200468.D
 Acq On : 4 Feb 2020 5:09 pm
 Operator : CHELSEAS
 Sample : IC8671-1
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 4 Sample Multiplier: 1

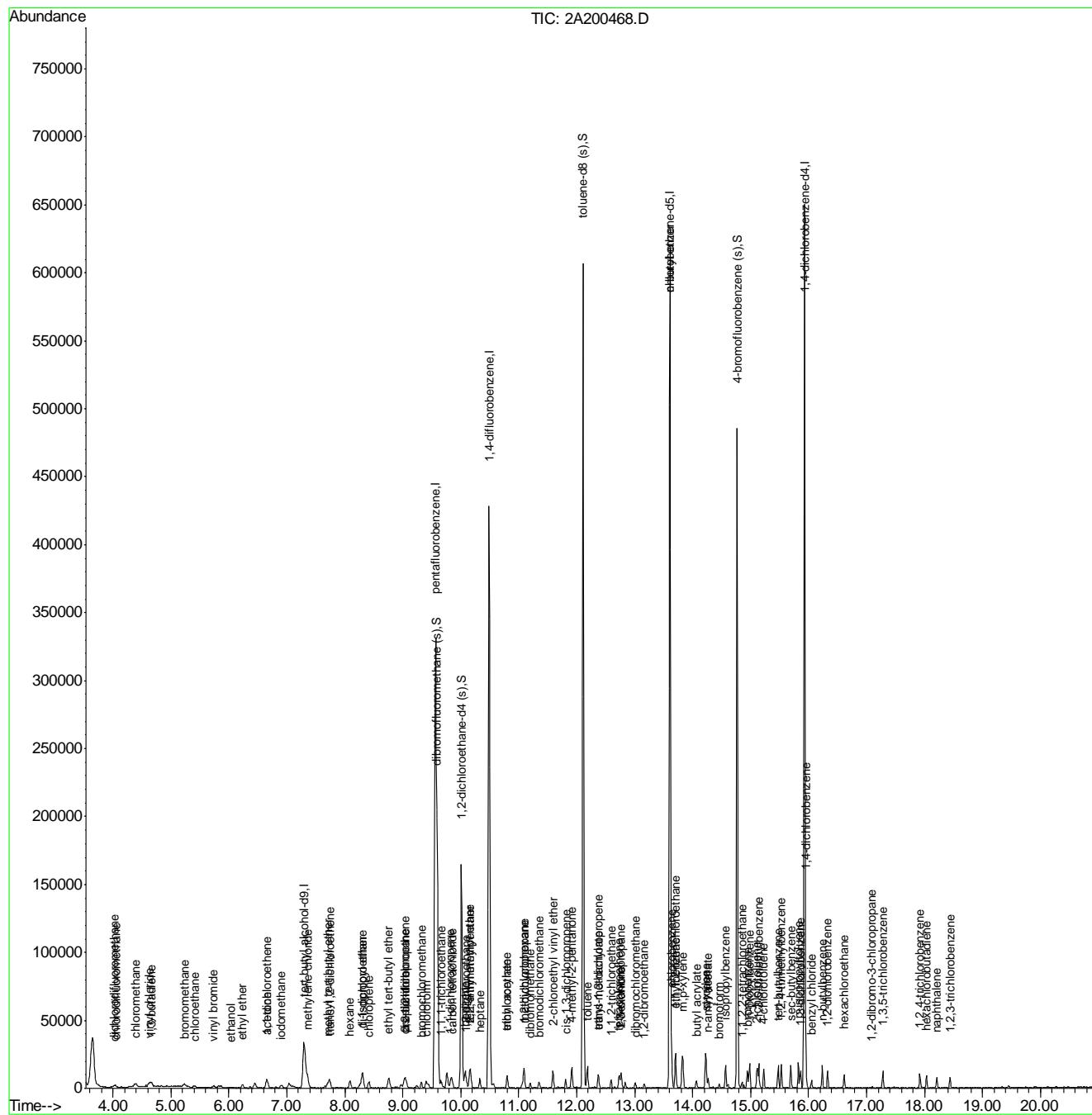
Quant Time: Feb 06 10:41:01 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200469.D
 Acq On : 4 Feb 2020 5:38 pm
 Operator : CHELSEAS
 Sample : IC8671-2
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 06 10:42:41 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

7.6.4

7

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	72095	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	239415	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	356691	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	307340	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	157210	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	107804	49.65	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.30%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	118682	50.41	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 100.82%	
75) toluene-d8 (s)	12.11	98	386572	49.48	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.96%	
99) 4-bromofluorobenzene (s)	14.77	95	147423	49.55	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.10%	

Target Compounds

				Qvalue
2) ethanol	6.03	45	5084	232.35 ug/L 99
3) tertiary butyl alcohol	7.43	59	2209	10.70 ug/L 79
4) 1,4-dioxane	11.15	88	1021	52.57 ug/L 95
6) chlorodifluoromethane	4.05	51	7107	2.13 ug/L 99
7) dichlorodifluoromethane	4.02	85	6882	1.82 ug/L 93
8) chloromethane	4.39	50	8536	2.00 ug/L 90
9) vinyl chloride	4.62	62	8118	1.93 ug/L 99
10) 1,3-butadiene	4.66	54	5164	2.15 ug/L 96
11) bromomethane	5.23	94	5614	2.17 ug/L 96
12) chloroethane	5.40	64	4208	1.97 ug/L 82
13) vinyl bromide	5.74	106	4296	1.89 ug/L 79
14) trichlorofluoromethane	5.87	101	8163	1.87 ug/L 94
15) ethyl ether	6.23	74	3299	2.29 ug/L 98
16) 2-chloroproppane	6.44	63	2444	2.16 ug/L # 77
18) freon 113	6.67	151	3657	1.78 ug/L 92
19) 1,1-dichloroethene	6.65	96	5092	2.14 ug/L 87
20) acetone	6.66	43	5235	9.37 ug/L 82
21) acetonitrile	7.08	41	6321	22.38 ug/L 90
22) iodomethane	6.90	142	8239	2.32 ug/L 92
23) carbon disulfide	7.04	76	15347	2.24 ug/L 97
24) methylene chloride	7.36	84	6612	2.41 ug/L 92
25) methyl acetate	7.12	43	3701	2.20 ug/L 92
26) methyl tert butyl ether	7.70	73	16668	2.44 ug/L 96
27) trans-1,2-dichloroethene	7.74	96	6225	2.39 ug/L 92
28) hexane	8.09	57	7554	1.83 ug/L 96
29) di-isopropyl ether	8.30	45	22220	2.34 ug/L 93
30) ethyl tert-butyl ether	8.76	59	20422	2.38 ug/L 99
31) 2-butanone	8.96	72	1923	8.20 ug/L # 72
32) 1,1-dichloroethane	8.31	63	11551	2.33 ug/L 99
33) chloroprene	8.41	53	9041	2.19 ug/L 91
34) acrylonitrile	7.65	53	1622	1.94 ug/L # 73
37) 2,2-dichloropropane	9.05	77	9472	2.45 ug/L 92
38) cis-1,2-dichloroethene	9.03	96	7194	2.42 ug/L 98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200469.D
 Acq On : 4 Feb 2020 5:38 pm
 Operator : CHELSEAS
 Sample : IC8671-2
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 06 10:42:41 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	9.04	54	6139	23.66	ug/L	89
40) bromochloromethane	9.32	130	4246	2.28	ug/L	94
41) tetrahydrofuran	9.33	42	1247	2.06	ug/L	# 63
42) chloroform	9.40	83	11390	2.36	ug/L	98
43) tert-butyl formate	9.44	59	4899	2.29	ug/L	91
46) methacrylonitrile	9.24	67	2001	2.21	ug/L	85
47) 1,1,1-trichloroethane	9.66	97	9678	2.26	ug/L	93
48) cyclohexane	9.77	84	7597	1.98	ug/L	84
49) 1,1-dichloropropene	9.83	75	8520	2.28	ug/L	98
51) carbon tetrachloride	9.86	117	8520	2.20	ug/L	89
54) 2,2,4-trimethylpentane	10.17	57	19956	1.87	ug/L	95
55) tert-amyl methyl ether	10.16	73	19294	2.39	ug/L	99
56) n-butyl alcohol	10.55	56	5788	103.07	ug/L	97
57) benzene	10.08	78	24768	2.34	ug/L	98
58) heptane	10.33	57	4156	1.81	ug/L	92
60) 1,2-dichloroethane	10.10	62	8719	2.43	ug/L	99
61) trichloroethene	10.80	95	6453	2.32	ug/L	95
62) ethyl acrylate	10.79	55	6545	2.15	ug/L	97
64) 2-chloroethyl vinyl ether	11.59	63	14160	11.05	ug/L	97
65) methyl methacrylate	11.06	100	1129	1.87	ug/L	# 51
66) 1,2-dichloropropane	11.09	63	6477	2.20	ug/L	95
67) methylcyclohexane	11.09	83	8818	1.87	ug/L	91
68) dibromomethane	11.20	93	3708	2.26	ug/L	96
69) bromodichloromethane	11.35	83	8624	2.26	ug/L	97
70) epichlorohydrin	11.68	57	2286	10.78	ug/L	87
71) cis-1,3-dichloropropene	11.80	75	10561	2.28	ug/L	98
72) 4-methyl-2-pentanone	11.91	58	8169	9.56	ug/L	90
73) 3-methyl-1-butanol	11.91	70	2017	38.92	ug/L	92
76) toluene	12.18	92	14830	2.32	ug/L	97
77) trans-1,3-dichloropropene	12.37	75	8874	2.20	ug/L	91
78) ethyl methacrylate	12.37	69	6578	2.16	ug/L	95
79) 1,1,2-trichloroethane	12.59	83	4619	2.41	ug/L	96
80) 2-hexanone	12.76	58	6776	8.61	ug/L	# 84
81) tetrachloroethene	12.74	166	6663	2.29	ug/L	89
82) 1,3-dichloropropane	12.77	76	8441	2.26	ug/L	97
83) butyl acetate	12.83	56	3347	2.13	ug/L	87
84) dibromochloromethane	13.01	129	6270	2.20	ug/L	98
85) 1,2-dibromoethane	13.16	107	5770	2.23	ug/L	95
86) n-butyl ether	13.60	57	26778	2.26	ug/L	86
87) chlorobenzene	13.64	112	16845	2.37	ug/L	95
88) 1,1,1,2-tetrachloroethane	13.71	131	6211	2.24	ug/L	98
89) ethylbenzene	13.70	91	28125	2.39	ug/L	95
90) m,p-xylene	13.82	106	21249	4.61	ug/L	94
91) o-xylene	14.22	91	22787	2.39	ug/L	99
92) styrene	14.24	104	16952	2.24	ug/L	96
93) n-amyl acetate	14.26	70	3581	2.10	ug/L	92
94) bromoform	14.46	173	3748	2.09	ug/L	97
95) butyl acrylate	14.06	55	10631	2.09	ug/L	94
96) isopropylbenzene	14.57	105	26950	2.32	ug/L	97
100) bromobenzene	14.95	156	7511	2.38	ug/L	87

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200469.D
 Acq On : 4 Feb 2020 5:38 pm
 Operator : CHELSEAS
 Sample : IC8671-2
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 06 10:42:41 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
101) 1,1,2,2-tetrachloroethane	14.85	83	6375	2.31	ug/L	96
102) trans-1,4-dichloro-2-buten	14.88	53	1358	1.95	ug/L	98
103) 1,2,3-trichloropropane	14.93	110	1564	2.25	ug/L	85
104) n-propylbenzene	14.98	91	31827	2.35	ug/L	98
105) 2-chlorotoluene	15.11	126	6913	2.33	ug/L	92
106) 4-chlorotoluene	15.22	91	19459	2.35	ug/L	98
107) 1,3,5-trimethylbenzene	15.14	105	21924	2.26	ug/L	98
108) tert-butylbenzene	15.48	119	18327	2.21	ug/L	95
109) 1,2,4-trimethylbenzene	15.53	105	22402	2.32	ug/L	98
110) sec-butylbenzene	15.70	105	27834	2.25	ug/L	99
111) 1,3-dichlorobenzene	15.86	146	13310	2.33	ug/L	98
112) p-isopropyltoluene	15.83	119	22772	2.18	ug/L	98
113) benzyl chloride	16.05	91	11859	2.28	ug/L	96
114) 1,4-dichlorobenzene	15.95	146	13190	2.30	ug/L	99
115) 1,2-dichlorobenzene	16.33	146	12718	2.33	ug/L	97
116) n-butylbenzene	16.23	92	12026	2.15	ug/L	98
117) 1,2-dibromo-3-chloropropan	17.09	157	1104	1.97	ug/L	84
118) 1,3,5-trichlorobenzene	17.28	180	10950	2.17	ug/L	96
119) 1,2,4-trichlorobenzene	17.92	180	9153	2.14	ug/L	95
120) hexachlorobutadiene	18.03	225	4819	2.10	ug/L	94
121) naphthalene	18.21	128	14822	1.98	ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	7419	2.03	ug/L	95
123) hexachloroethane	16.62	201	3931	2.03	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200469.D
Acq On : 4 Feb 2020 5:38 pm
Operator : CHELSEAS
Sample : IC8671-2
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 5 Sample Multiplier: 1

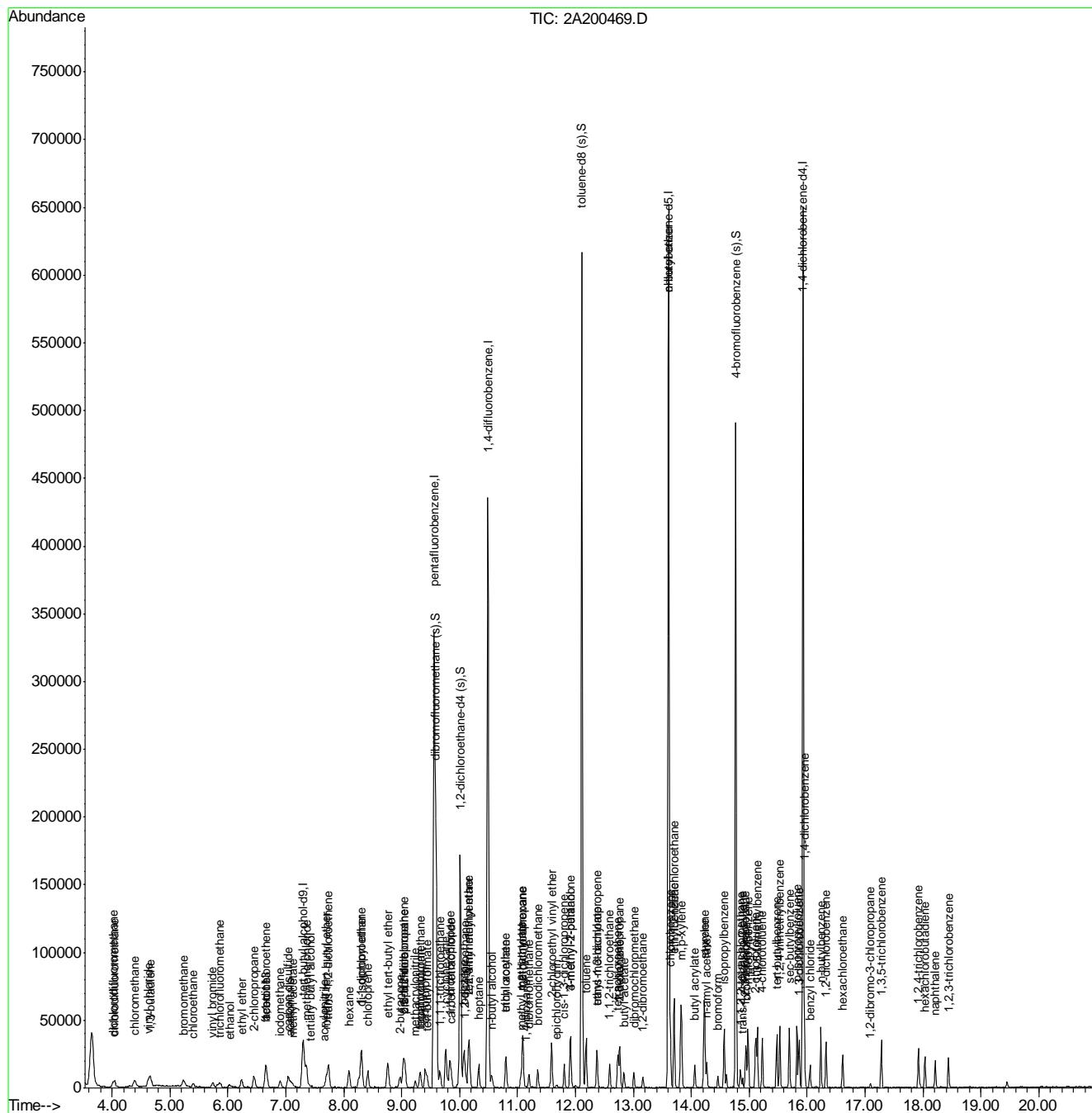
Quant Time: Feb 06 10:42:41 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200470.D
 Acq On : 4 Feb 2020 6:06 pm
 Operator : CHELSEAS
 Sample : IC8671-4
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 06 10:43:51 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

7.6.5

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	70439	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	234503	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	352234	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	302862	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	153796	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	106251	49.96	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.92%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	117824	50.68	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 101.36%	
75) toluene-d8 (s)	12.11	98	379107	49.24	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.48%	
99) 4-bromofluorobenzene (s)	14.77	95	145219	49.89	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.78%	

Target Compounds

				QValue	
2) ethanol	6.01	45	7977	373.13	ug/L 100
3) tertiary butyl alcohol	7.43	59	3704	18.36	ug/L 86
4) 1,4-dioxane	11.13	88	1759	92.69	ug/L 79
6) chlorodifluoromethane	4.04	51	13610	4.16	ug/L 98
7) dichlorodifluoromethane	4.01	85	15329	4.13	ug/L 99
8) chloromethane	4.38	50	17191	4.11	ug/L 97
9) vinyl chloride	4.62	62	17211	4.19	ug/L 98
10) 1,3-butadiene	4.66	54	9620	4.08	ug/L 96
11) bromomethane	5.23	94	10723	4.23	ug/L 99
12) chloroethane	5.40	64	8417	4.02	ug/L 96
13) vinyl bromide	5.73	106	8737	3.93	ug/L 99
14) trichlorofluoromethane	5.86	101	17051	3.98	ug/L 99
15) ethyl ether	6.23	74	5208	3.69	ug/L 93
16) 2-chloropropane	6.45	63	4200	3.78	ug/L # 84
17) acrolein	6.47	56	1181	3.00	ug/L 92
18) freon 113	6.66	151	7653	3.80	ug/L # 84
19) 1,1-dichloroethene	6.64	96	9087	3.90	ug/L 94
20) acetone	6.66	43	8358	15.27	ug/L 88
21) acetonitrile	7.08	41	10526	38.04	ug/L 93
22) iodomethane	6.90	142	13767	3.95	ug/L 97
23) carbon disulfide	7.03	76	27330	4.07	ug/L 99
24) methylene chloride	7.36	84	10598	3.95	ug/L 93
25) methyl acetate	7.12	43	6420	3.90	ug/L 84
26) methyl tert butyl ether	7.70	73	26634	3.99	ug/L 98
27) trans-1,2-dichloroethene	7.74	96	10367	4.07	ug/L 98
28) hexane	8.09	57	15401	3.81	ug/L 94
29) di-isopropyl ether	8.29	45	36351	3.90	ug/L 91
30) ethyl tert-butyl ether	8.76	59	33618	4.00	ug/L 100
31) 2-butanone	8.96	72	3232	14.07	ug/L # 80
32) 1,1-dichloroethane	8.31	63	19593	4.03	ug/L 96
33) chloroprene	8.41	53	15569	3.85	ug/L 97
34) acrylonitrile	7.65	53	2642	3.22	ug/L 84
35) vinyl acetate	8.25	86	1734	3.59	ug/L # 41

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200470.D
 Acq On : 4 Feb 2020 6:06 pm
 Operator : CHELSEAS
 Sample : IC8671-4
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 06 10:43:51 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	8.97	45	1199	3.58	ug/L	81
37) 2,2-dichloropropane	9.05	77	15952	4.21	ug/L	94
38) cis-1,2-dichloroethene	9.03	96	11577	3.97	ug/L	89
39) propionitrile	9.04	54	9654	37.99	ug/L	93
40) bromochloromethane	9.31	130	7102	3.89	ug/L	92
41) tetrahydrofuran	9.34	42	2405	4.06	ug/L	99
42) chloroform	9.40	83	19042	4.02	ug/L	97
43) tert-butyl formate	9.44	59	7877	3.76	ug/L	97
44) isobutyl alcohol	9.80	43	2995	36.75	ug/L	# 48
46) methacrylonitrile	9.23	67	3241	3.66	ug/L	83
47) 1,1,1-trichloroethane	9.66	97	16401	3.90	ug/L	95
48) cyclohexane	9.76	84	15903	4.24	ug/L	87
49) 1,1-dichloropropene	9.83	75	14338	3.92	ug/L	97
50) tert-amyl alcohol	9.97	73	1848	18.76	ug/L	# 88
51) carbon tetrachloride	9.85	117	14720	3.88	ug/L	94
54) 2,2,4-trimethylpentane	10.17	57	41068	3.90	ug/L	97
55) tert-amyl methyl ether	10.15	73	31822	3.99	ug/L	99
56) n-butyl alcohol	10.55	56	9456	170.51	ug/L	99
57) benzene	10.07	78	41716	4.00	ug/L	98
58) heptane	10.33	57	8365	3.69	ug/L	93
59) isopropyl acetate	9.99	87	1716	3.40	ug/L	# 66
60) 1,2-dichloroethane	10.10	62	14499	4.09	ug/L	97
61) trichloroethene	10.80	95	11086	4.04	ug/L	92
62) ethyl acrylate	10.79	55	10696	3.56	ug/L	97
63) 2-nitropropane	11.56	41	1872	3.44	ug/L	89
64) 2-chloroethyl vinyl ether	11.59	63	23087	18.24	ug/L	99
65) methyl methacrylate	11.06	100	2025	3.40	ug/L	# 79
66) 1,2-dichloropropane	11.09	63	11747	4.05	ug/L	95
67) methylcyclohexane	11.09	83	18116	3.89	ug/L	97
68) dibromomethane	11.20	93	6345	3.91	ug/L	89
69) bromodichloromethane	11.35	83	14793	3.93	ug/L	95
70) epichlorohydrin	11.68	57	3987	19.04	ug/L	93
71) cis-1,3-dichloropropene	11.80	75	17272	3.78	ug/L	96
72) 4-methyl-2-pentanone	11.91	58	12727	15.07	ug/L	91
73) 3-methyl-1-butanol	11.91	70	3515	68.69	ug/L	96
76) toluene	12.19	92	25329	4.01	ug/L	99
77) trans-1,3-dichloropropene	12.37	75	15303	3.85	ug/L	100
78) ethyl methacrylate	12.36	69	10893	3.63	ug/L	93
79) 1,1,2-trichloroethane	12.59	83	7167	3.79	ug/L	94
80) 2-hexanone	12.76	58	11528	14.87	ug/L	94
81) tetrachloroethene	12.73	166	11236	3.91	ug/L	97
82) 1,3-dichloropropane	12.77	76	14222	3.86	ug/L	96
83) butyl acetate	12.83	56	5736	3.71	ug/L	86
84) dibromochloromethane	13.01	129	10349	3.68	ug/L	97
85) 1,2-dibromoethane	13.16	107	9648	3.78	ug/L	97
86) n-butyl ether	13.60	57	46191	3.96	ug/L	94
87) chlorobenzene	13.64	112	27465	3.91	ug/L	99
88) 1,1,1,2-tetrachloroethane	13.71	131	10171	3.73	ug/L	95
89) ethylbenzene	13.70	91	47068	4.06	ug/L	98
90) m,p-xylene	13.83	106	35486	7.81	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200470.D
 Acq On : 4 Feb 2020 6:06 pm
 Operator : CHELSEAS
 Sample : IC8671-4
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 06 10:43:51 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.22	91	37692	4.01	ug/L	95
92) styrene	14.24	104	29037	3.90	ug/L	92
93) n-amyl acetate	14.27	70	6586	3.91	ug/L	98
94) bromoform	14.46	173	6113	3.46	ug/L	98
95) butyl acrylate	14.06	55	17236	3.44	ug/L	96
96) isopropylbenzene	14.57	105	45430	3.97	ug/L	98
97) cis-1,4-dichloro-2-butene	14.61	88	3197	3.13	ug/L	96
100) bromobenzene	14.95	156	12302	3.98	ug/L	98
101) 1,1,2,2-tetrachloroethane	14.85	83	10567	3.92	ug/L	96
102) trans-1,4-dichloro-2-butene	14.88	53	2363	3.47	ug/L	89
103) 1,2,3-trichloropropane	14.93	110	2533	3.73	ug/L	91
104) n-propylbenzene	14.98	91	53927	4.08	ug/L	97
105) 2-chlorotoluene	15.11	126	11394	3.93	ug/L	94
106) 4-chlorotoluene	15.22	91	33079	4.09	ug/L	99
107) 1,3,5-trimethylbenzene	15.14	105	37354	3.93	ug/L	96
108) tert-butylbenzene	15.48	119	32060	3.96	ug/L	99
109) 1,2,4-trimethylbenzene	15.53	105	38497	4.08	ug/L	97
110) sec-butylbenzene	15.70	105	48388	4.00	ug/L	99
111) 1,3-dichlorobenzene	15.86	146	21722	3.89	ug/L	94
112) p-isopropyltoluene	15.83	119	40559	3.97	ug/L	97
113) benzyl chloride	16.05	91	19211	3.77	ug/L	96
114) 1,4-dichlorobenzene	15.96	146	22736	4.06	ug/L	94
115) 1,2-dichlorobenzene	16.33	146	21513	4.03	ug/L	98
116) n-butylbenzene	16.23	92	21724	3.97	ug/L	97
117) 1,2-dibromo-3-chloropropan	17.09	157	1861	3.39	ug/L	95
118) 1,3,5-trichlorobenzene	17.28	180	19092	3.87	ug/L	97
119) 1,2,4-trichlorobenzene	17.92	180	15422	3.68	ug/L	97
120) hexachlorobutadiene	18.03	225	8737	3.89	ug/L	97
121) naphthalene	18.21	128	25398	3.46	ug/L	98
122) 1,2,3-trichlorobenzene	18.44	180	12758	3.57	ug/L	97
123) hexachloroethane	16.62	201	6732	3.55	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200470.D
Acq On : 4 Feb 2020 6:06 pm
Operator : CHELSEAS
Sample : IC8671-4
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 6 Sample Multiplier: 1

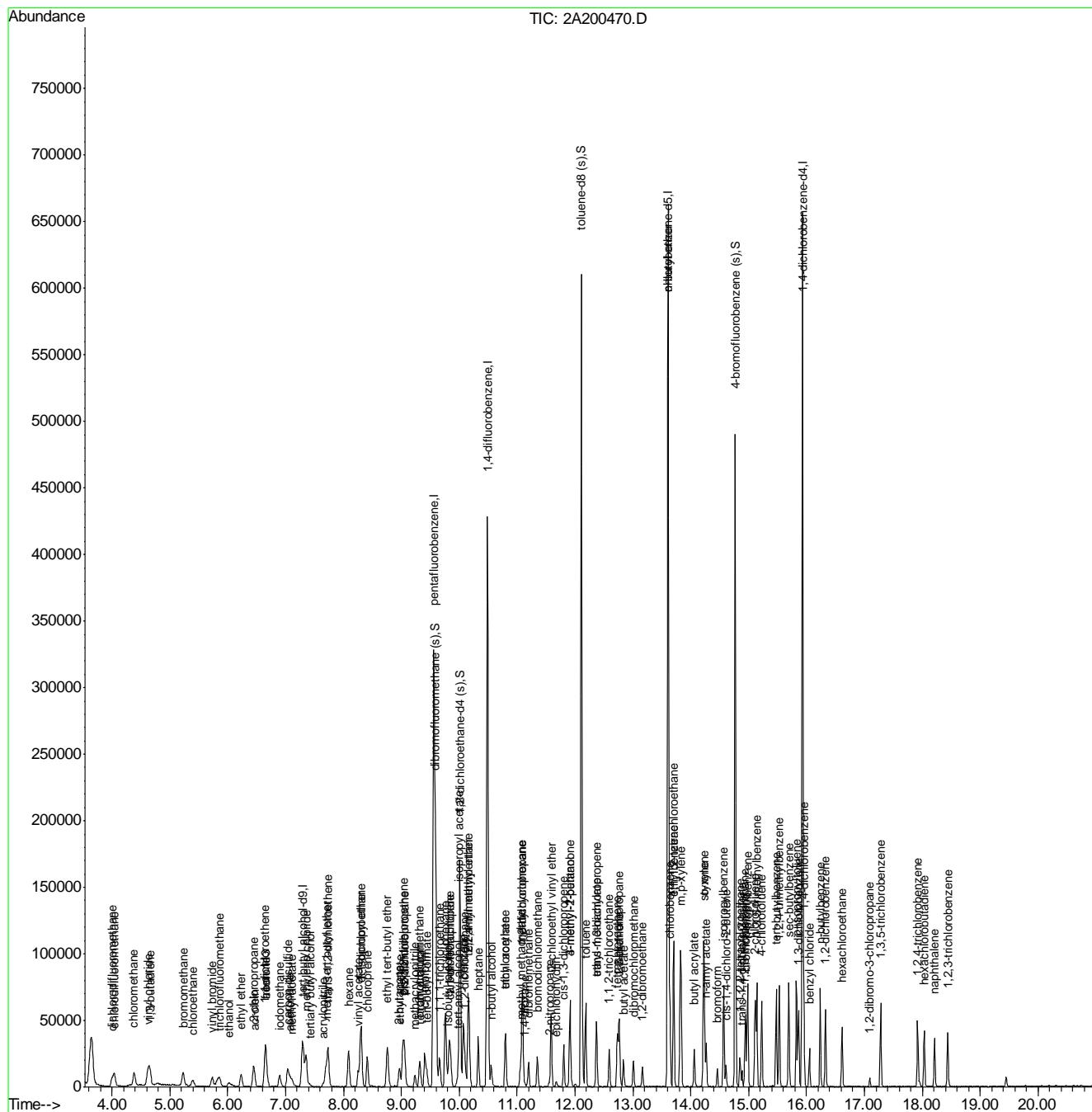
Quant Time: Feb 06 10:43:51 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

Last Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200471.D
 Acq On : 4 Feb 2020 6:35 pm
 Operator : CHELSEAS
 Sample : IC8671-8
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 05 07:47:52 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

7.6.6

7

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	69842	500.00	ug/L	0.00
5) pentafluorobenzene	9.57	168	235303	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	348683	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	302265	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	155046	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	107069	50.17	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.34%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	117330	50.98	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 101.96%	
75) toluene-d8 (s)	12.11	98	381074	49.59	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.18%	
99) 4-bromofluorobenzene (s)	14.76	95	146108	49.80	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.60%	

Target Compounds

				Qvalue
2) ethanol	6.01	45	17624	831.42 ug/L 95
3) tertiary butyl alcohol	7.42	59	7785	38.93 ug/L 94
4) 1,4-dioxane	11.13	88	3669	194.99 ug/L 91
6) chlorodifluoromethane	4.04	51	26047	7.93 ug/L 95
7) dichlorodifluoromethane	4.01	85	31233	8.38 ug/L 99
8) chloromethane	4.38	50	34865	8.30 ug/L 98
9) vinyl chloride	4.62	62	33137	8.03 ug/L 99
10) 1,3-butadiene	4.65	54	18641	7.88 ug/L 91
11) bromomethane	5.22	94	21985	8.64 ug/L 97
12) chloroethane	5.39	64	16698	7.96 ug/L 94
13) vinyl bromide	5.74	106	18129	8.13 ug/L 92
14) trichlorofluoromethane	5.85	101	34926	8.12 ug/L 97
15) ethyl ether	6.23	74	10793	7.63 ug/L 95
16) 2-chloropropane	6.45	63	8855	7.95 ug/L 95
17) acrolein	6.46	56	2733	6.92 ug/L 88
18) freon 113	6.66	151	15860	7.84 ug/L 90
19) 1,1-dichloroethene	6.65	96	18726	8.02 ug/L 90
20) acetone	6.66	43	17284	31.47 ug/L 96
21) acetonitrile	7.08	41	21675	78.07 ug/L 93
22) iodomethane	6.90	142	27768	7.95 ug/L 97
23) carbon disulfide	7.03	76	53426	7.93 ug/L 99
24) methylene chloride	7.36	84	21413	7.95 ug/L 98
25) methyl acetate	7.11	43	12835	7.77 ug/L 95
26) methyl tert butyl ether	7.70	73	53173	7.93 ug/L 98
27) trans-1,2-dichloroethene	7.73	96	20442	8.00 ug/L 95
28) hexane	8.09	57	31305	7.71 ug/L 99
29) di-isopropyl ether	8.30	45	74342	7.95 ug/L 95
30) ethyl tert-butyl ether	8.76	59	67499	8.01 ug/L 99
31) 2-butanone	8.96	72	6615	28.70 ug/L 96
32) 1,1-dichloroethane	8.31	63	38927	7.98 ug/L 97
33) chloroprene	8.41	53	30788	7.59 ug/L 98
34) acrylonitrile	7.65	53	6586	8.00 ug/L 88
35) vinyl acetate	8.25	86	3556	7.34 ug/L 94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200471.D
 Acq On : 4 Feb 2020 6:35 pm
 Operator : CHELSEAS
 Sample : IC8671-8
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 05 07:47:52 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	8.98	45	2475	7.37	ug/L	88
37) 2,2-dichloropropane	9.05	77	30129	7.92	ug/L	99
38) cis-1,2-dichloroethene	9.03	96	23285	7.96	ug/L	97
39) propionitrile	9.04	54	19737	77.41	ug/L	89
40) bromochloromethane	9.32	130	14476	7.90	ug/L	91
41) tetrahydrofuran	9.33	42	4457	7.50	ug/L	88
42) chloroform	9.40	83	37116	7.82	ug/L	96
43) tert-butyl formate	9.43	59	16519	7.85	ug/L	92
44) isobutyl alcohol	9.80	43	5463	66.81	ug/L #	72
46) methacrylonitrile	9.24	67	6685	7.52	ug/L	98
47) 1,1,1-trichloroethane	9.66	97	33480	7.94	ug/L	99
48) cyclohexane	9.76	84	31178	8.29	ug/L	98
49) 1,1-dichloropropene	9.83	75	28828	7.85	ug/L	94
50) tert-amyl alcohol	9.96	73	3737	37.80	ug/L	85
51) carbon tetrachloride	9.85	117	30575	8.02	ug/L	95
54) 2,2,4-trimethylpentane	10.17	57	80841	7.75	ug/L	98
55) tert-amyl methyl ether	10.16	73	63929	8.10	ug/L	99
56) n-butyl alcohol	10.55	56	20510	373.60	ug/L	98
57) benzene	10.07	78	83044	8.04	ug/L	99
58) heptane	10.32	57	17091	7.62	ug/L	93
59) isopropyl acetate	9.99	87	3563	7.14	ug/L	97
60) 1,2-dichloroethane	10.10	62	28259	8.05	ug/L	97
61) trichloroethene	10.80	95	21075	7.76	ug/L	94
62) ethyl acrylate	10.79	55	22649	7.62	ug/L	99
63) 2-nitropropane	11.56	41	4014	7.46	ug/L	92
64) 2-chloroethyl vinyl ether	11.59	63	47279	37.74	ug/L	97
65) methyl methacrylate	11.06	100	4534	7.69	ug/L #	81
66) 1,2-dichloropropane	11.09	63	22267	7.75	ug/L	93
67) methylcyclohexane	11.09	83	35894	7.78	ug/L	98
68) dibromomethane	11.20	93	12431	7.74	ug/L	96
69) bromodichloromethane	11.35	83	29086	7.81	ug/L	100
70) epichlorohydrin	11.68	57	7989	38.54	ug/L	91
71) cis-1,3-dichloropropene	11.80	75	35050	7.74	ug/L	97
72) 4-methyl-2-pentanone	11.91	58	26303	31.47	ug/L	97
73) 3-methyl-1-butanol	11.91	70	7211	142.36	ug/L	96
76) toluene	12.19	92	48803	7.75	ug/L	96
77) trans-1,3-dichloropropene	12.37	75	30112	7.60	ug/L	97
78) ethyl methacrylate	12.36	69	22527	7.52	ug/L	98
79) 1,1,2-trichloroethane	12.59	83	14766	7.82	ug/L	95
80) 2-hexanone	12.76	58	24008	31.03	ug/L	95
81) tetrachloroethene	12.73	166	22119	7.72	ug/L	96
82) 1,3-dichloropropane	12.77	76	28945	7.88	ug/L	99
83) butyl acetate	12.83	56	11777	7.63	ug/L	96
84) dibromochloromethane	13.01	129	20527	7.31	ug/L	95
85) 1,2-dibromoethane	13.16	107	19137	7.52	ug/L	100
86) n-butyl ether	13.60	57	91387	7.86	ug/L	96
87) chlorobenzene	13.64	112	54623	7.80	ug/L	96
88) 1,1,1,2-tetrachloroethane	13.71	131	20874	7.67	ug/L	97
89) ethylbenzene	13.70	91	92677	8.01	ug/L	99
90) m,p-xylene	13.82	106	72117	15.91	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200471.D
 Acq On : 4 Feb 2020 6:35 pm
 Operator : CHELSEAS
 Sample : IC8671-8
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 05 07:47:52 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.22	91	75165	8.00	ug/L	99
92) styrene	14.24	104	58998	7.93	ug/L	95
93) n-amyl acetate	14.27	70	12454	7.41	ug/L	90
94) bromoform	14.46	173	12637	7.17	ug/L	95
95) butyl acrylate	14.06	55	37315	7.46	ug/L	98
96) isopropylbenzene	14.57	105	90894	7.96	ug/L	98
97) cis-1,4-dichloro-2-butene	14.61	88	7030	6.89	ug/L	97
100) bromobenzene	14.95	156	24434	7.83	ug/L	93
101) 1,1,2,2-tetrachloroethane	14.85	83	20699	7.61	ug/L	98
102) trans-1,4-dichloro-2-butene	14.88	53	5032	7.33	ug/L	97
103) 1,2,3-trichloropropane	14.93	110	5403	7.88	ug/L	87
104) n-propylbenzene	14.98	91	107746	8.08	ug/L	98
105) 2-chlorotoluene	15.11	126	22406	7.66	ug/L	87
106) 4-chlorotoluene	15.22	91	65356	8.01	ug/L	99
107) 1,3,5-trimethylbenzene	15.14	105	75242	7.86	ug/L	100
108) tert-butylbenzene	15.48	119	63011	7.71	ug/L	99
109) 1,2,4-trimethylbenzene	15.53	105	75682	7.95	ug/L	98
110) sec-butylbenzene	15.70	105	98692	8.09	ug/L	98
111) 1,3-dichlorobenzene	15.86	146	44957	7.98	ug/L	97
112) p-isopropyltoluene	15.83	119	81051	7.86	ug/L	99
113) benzyl chloride	16.05	91	37632	7.32	ug/L	98
114) 1,4-dichlorobenzene	15.96	146	43911	7.77	ug/L	99
115) 1,2-dichlorobenzene	16.33	146	41959	7.79	ug/L	97
116) n-butylbenzene	16.23	92	42747	7.75	ug/L	100
117) 1,2-dibromo-3-chloropropan	17.09	157	3961	7.16	ug/L	92
118) 1,3,5-trichlorobenzene	17.28	180	38734	7.78	ug/L	98
119) 1,2,4-trichlorobenzene	17.92	180	32117	7.61	ug/L	99
120) hexachlorobutadiene	18.04	225	17463	7.71	ug/L	94
121) naphthalene	18.21	128	53632	7.26	ug/L	98
122) 1,2,3-trichlorobenzene	18.44	180	26796	7.44	ug/L	99
123) hexachloroethane	16.62	201	13883	7.25	ug/L	94
124) 2-ethylhexyl acrylate	17.95	70	2571	1.02	ug/L #	76
125) 2-methylnaphthalene	19.45	142	9797	2.89	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200471.D
Acq On : 4 Feb 2020 6:35 pm
Operator : CHELSEAS
Sample : IC8671-8
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 7 Sample Multiplier: 1

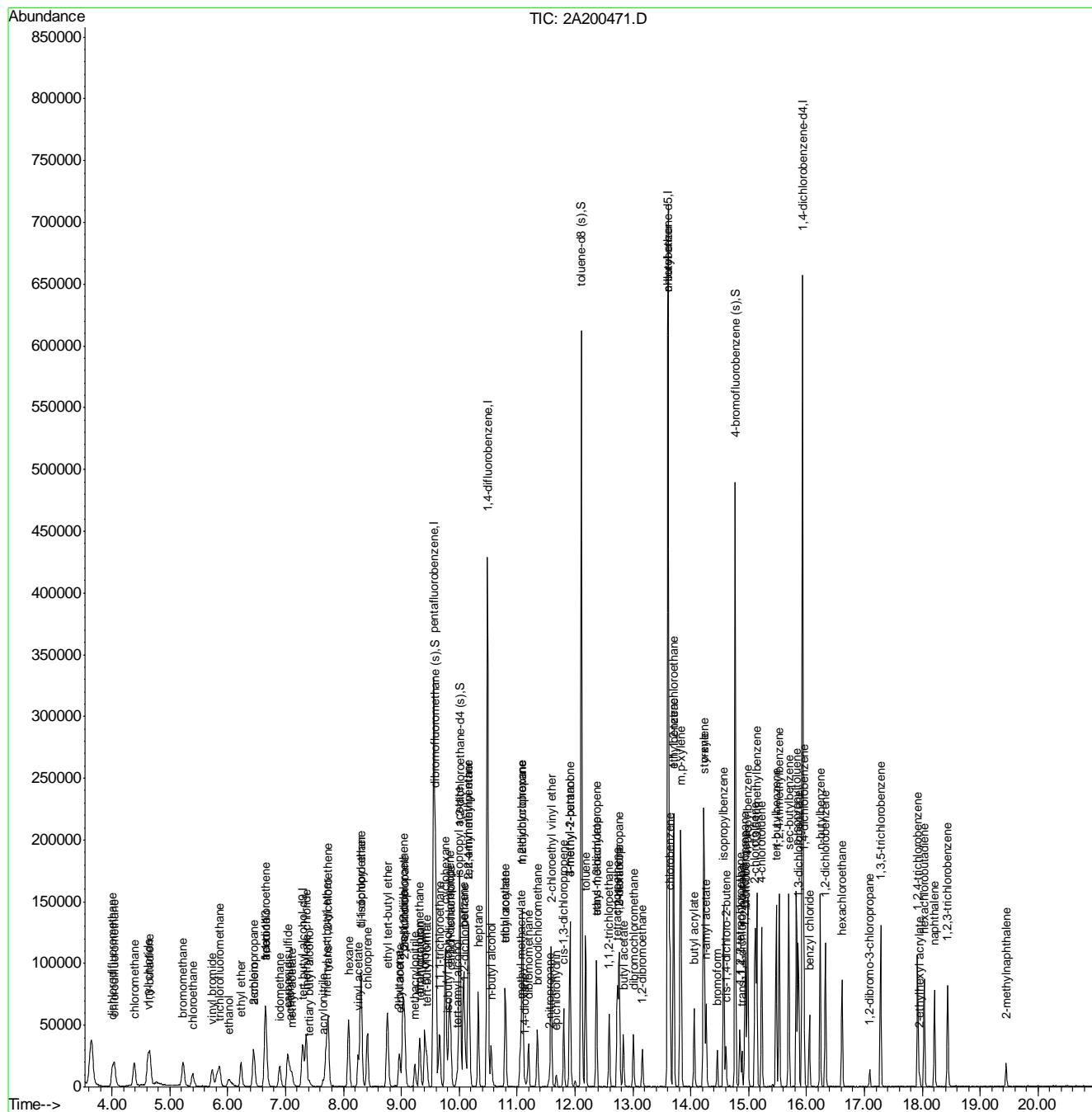
Quant Time: Feb 05 07:47:52 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

Last Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200472.D
 Acq On : 4 Feb 2020 7:04 pm
 Operator : CHELSEAS
 Sample : IC8671-20
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 05 07:47:53 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

7.67

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	72273	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	232139	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	351567	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	301890	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	155235	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	106684	50.68	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.36%
53) 1,2-dichloroethane-d4 (s)	10.01	65	116887	50.38	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	100.76%
75) toluene-d8 (s)	12.11	98	380653	49.60	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.20%
99) 4-bromofluorobenzene (s)	14.77	95	146510	49.87	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.74%

Target Compounds

				Qvalue
2) ethanol	6.02	45	42664	1945.00 ug/L 95
3) tertiary butyl alcohol	7.41	59	20269	97.94 ug/L 99
4) 1,4-dioxane	11.13	88	9881	507.47 ug/L 93
6) chlorodifluoromethane	4.04	51	66303	20.46 ug/L 99
7) dichlorodifluoromethane	4.01	85	75908	20.66 ug/L 98
8) chloromethane	4.39	50	86488	20.87 ug/L 97
9) vinyl chloride	4.61	62	85397	20.98 ug/L 98
10) 1,3-butadiene	4.65	54	47833	20.50 ug/L 95
11) bromomethane	5.22	94	52756	21.01 ug/L 100
12) chloroethane	5.39	64	42008	20.29 ug/L 98
13) vinyl bromide	5.73	106	45694	20.77 ug/L 94
14) trichlorofluoromethane	5.85	101	85641	20.18 ug/L 100
15) ethyl ether	6.23	74	28409	20.36 ug/L 95
16) 2-chloropropane	6.44	63	22256	20.25 ug/L 88
17) acrolein	6.45	56	7798	20.00 ug/L 94
18) freon 113	6.66	151	39648	19.87 ug/L 98
19) 1,1-dichloroethene	6.65	96	46374	20.13 ug/L 95
20) acetone	6.65	43	43572	80.42 ug/L 97
21) acetonitrile	7.07	41	55502	202.63 ug/L 96
22) iodomethane	6.89	142	69326	20.11 ug/L 98
23) carbon disulfide	7.03	76	133769	20.12 ug/L 98
24) methylene chloride	7.35	84	52980	19.94 ug/L 97
25) methyl acetate	7.11	43	33442	20.52 ug/L 95
26) methyl tert butyl ether	7.71	73	133909	20.24 ug/L 99
27) trans-1,2-dichloroethene	7.74	96	50716	20.12 ug/L 98
28) hexane	8.09	57	78518	19.61 ug/L 99
29) di-isopropyl ether	8.30	45	187569	20.33 ug/L 99
30) ethyl tert-butyl ether	8.76	59	169716	20.42 ug/L 98
31) 2-butanone	8.96	72	17661	77.67 ug/L 96
32) 1,1-dichloroethane	8.31	63	96904	20.13 ug/L 97
33) chloroprene	8.41	53	79099	19.77 ug/L 95
34) acrylonitrile	7.64	53	16396	20.19 ug/L 98
35) vinyl acetate	8.25	86	9774	20.46 ug/L 99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200472.D
 Acq On : 4 Feb 2020 7:04 pm
 Operator : CHELSEAS
 Sample : IC8671-20
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 05 07:47:53 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	8.97	45	6929	20.92	ug/L	83
37) 2,2-dichloropropane	9.05	77	77450	20.64	ug/L	96
38) cis-1,2-dichloroethene	9.02	96	57826	20.04	ug/L	100
39) propionitrile	9.04	54	50953	202.56	ug/L	97
40) bromochloromethane	9.31	130	36489	20.17	ug/L	97
41) tetrahydrofuran	9.34	42	12050	20.56	ug/L	98
42) chloroform	9.40	83	95845	20.46	ug/L	97
43) tert-butyl formate	9.44	59	42389	20.42	ug/L	97
44) isobutyl alcohol	9.80	43	16514	204.70	ug/L	#
46) methacrylonitrile	9.24	67	17756	20.24	ug/L	96
47) 1,1,1-trichloroethane	9.66	97	83651	20.11	ug/L	96
48) cyclohexane	9.76	84	76316	20.56	ug/L	98
49) 1,1-dichloropropene	9.83	75	73153	20.20	ug/L	97
50) tert-amyl alcohol	9.96	73	9756	100.02	ug/L	#
51) carbon tetrachloride	9.85	117	74765	19.88	ug/L	96
54) 2,2,4-trimethylpentane	10.17	57	206660	19.65	ug/L	99
55) tert-amyl methyl ether	10.16	73	160452	20.17	ug/L	99
56) n-butyl alcohol	10.55	56	54615	986.69	ug/L	98
57) benzene	10.07	78	208093	19.99	ug/L	99
58) heptane	10.33	57	44483	19.67	ug/L	99
59) isopropyl acetate	9.98	87	9856	19.58	ug/L	98
60) 1,2-dichloroethane	10.10	62	71472	20.20	ug/L	98
61) trichloroethene	10.80	95	53886	19.68	ug/L	98
62) ethyl acrylate	10.79	55	59804	19.96	ug/L	98
63) 2-nitropropane	11.56	41	10046	18.51	ug/L	93
64) 2-chloroethyl vinyl ether	11.59	63	123634	97.89	ug/L	99
65) methyl methacrylate	11.06	100	11669	19.62	ug/L	97
66) 1,2-dichloropropane	11.09	63	57426	19.83	ug/L	98
67) methylcyclohexane	11.09	83	90150	19.39	ug/L	97
68) dibromomethane	11.19	93	32105	19.82	ug/L	94
69) bromodichloromethane	11.35	83	74929	19.94	ug/L	98
70) epichlorohydrin	11.67	57	20871	99.86	ug/L	94
71) cis-1,3-dichloropropene	11.80	75	90540	19.83	ug/L	99
72) 4-methyl-2-pentanone	11.91	58	66677	79.13	ug/L	97
73) 3-methyl-1-butanol	11.91	70	20153	394.58	ug/L	96
76) toluene	12.19	92	124654	19.81	ug/L	96
77) trans-1,3-dichloropropene	12.37	75	78422	19.81	ug/L	99
78) ethyl methacrylate	12.36	69	58608	19.60	ug/L	98
79) 1,1,2-trichloroethane	12.59	83	37845	20.08	ug/L	96
80) 2-hexanone	12.76	58	60516	78.30	ug/L	99
81) tetrachloroethene	12.74	166	57032	19.93	ug/L	98
82) 1,3-dichloropropane	12.77	76	72487	19.76	ug/L	96
83) butyl acetate	12.83	56	30644	19.89	ug/L	96
84) dibromochloromethane	13.01	129	54197	19.33	ug/L	97
85) 1,2-dibromoethane	13.16	107	49841	19.61	ug/L	98
86) n-butyl ether	13.60	57	231931	19.97	ug/L	99
87) chlorobenzene	13.64	112	138036	19.73	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.71	131	53052	19.52	ug/L	96
89) ethylbenzene	13.70	91	233052	20.16	ug/L	99
90) m,p-xylene	13.82	106	179933	39.75	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200472.D
 Acq On : 4 Feb 2020 7:04 pm
 Operator : CHELSEAS
 Sample : IC8671-20
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Feb 05 07:47:53 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.22	91	188271	20.07	ug/L	98
92) styrene	14.24	104	149552	20.13	ug/L	92
93) n-amyl acetate	14.27	70	32368	19.28	ug/L	93
94) bromoform	14.46	173	33755	19.16	ug/L	96
95) butyl acrylate	14.06	55	96226	19.27	ug/L	99
96) isopropylbenzene	14.57	105	227862	19.98	ug/L	99
97) cis-1,4-dichloro-2-butene	14.61	88	18436	18.09	ug/L	93
100) bromobenzene	14.95	156	63025	20.18	ug/L	94
101) 1,1,2,2-tetrachloroethane	14.85	83	53188	19.53	ug/L	99
102) trans-1,4-dichloro-2-butene	14.88	53	13464	19.58	ug/L	96
103) 1,2,3-trichloropropane	14.93	110	13673	19.92	ug/L	98
104) n-propylbenzene	14.98	91	270852	20.29	ug/L	99
105) 2-chlorotoluene	15.11	126	57417	19.61	ug/L	96
106) 4-chlorotoluene	15.22	91	165069	20.20	ug/L	97
107) 1,3,5-trimethylbenzene	15.14	105	193102	20.14	ug/L	100
108) tert-butylbenzene	15.48	119	162848	19.90	ug/L	99
109) 1,2,4-trimethylbenzene	15.53	105	191136	20.07	ug/L	99
110) sec-butylbenzene	15.70	105	245477	20.10	ug/L	99
111) 1,3-dichlorobenzene	15.86	146	112499	19.95	ug/L	100
112) p-isopropyltoluene	15.83	119	207907	20.15	ug/L	100
113) benzyl chloride	16.05	91	99713	19.38	ug/L	98
114) 1,4-dichlorobenzene	15.96	146	114185	20.18	ug/L	98
115) 1,2-dichlorobenzene	16.33	146	108995	20.21	ug/L	98
116) n-butylbenzene	16.23	92	110179	19.96	ug/L	94
117) 1,2-dibromo-3-chloropropan	17.09	157	10654	19.24	ug/L	96
118) 1,3,5-trichlorobenzene	17.28	180	98163	19.70	ug/L	99
119) 1,2,4-trichlorobenzene	17.92	180	81399	19.26	ug/L	99
120) hexachlorobutadiene	18.04	225	44706	19.72	ug/L	97
121) naphthalene	18.21	128	142868	19.31	ug/L	98
122) 1,2,3-trichlorobenzene	18.44	180	69332	19.23	ug/L	99
123) hexachloroethane	16.62	201	36309	18.95	ug/L	97
124) 2-ethylhexyl acrylate	17.95	70	7867	3.12	ug/L	87
125) 2-methylnaphthalene	19.45	142	29476	8.68	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200472.D
Acq On : 4 Feb 2020 7:04 pm
Operator : CHELSEAS
Sample : IC8671-20
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 8 Sample Multiplier: 1

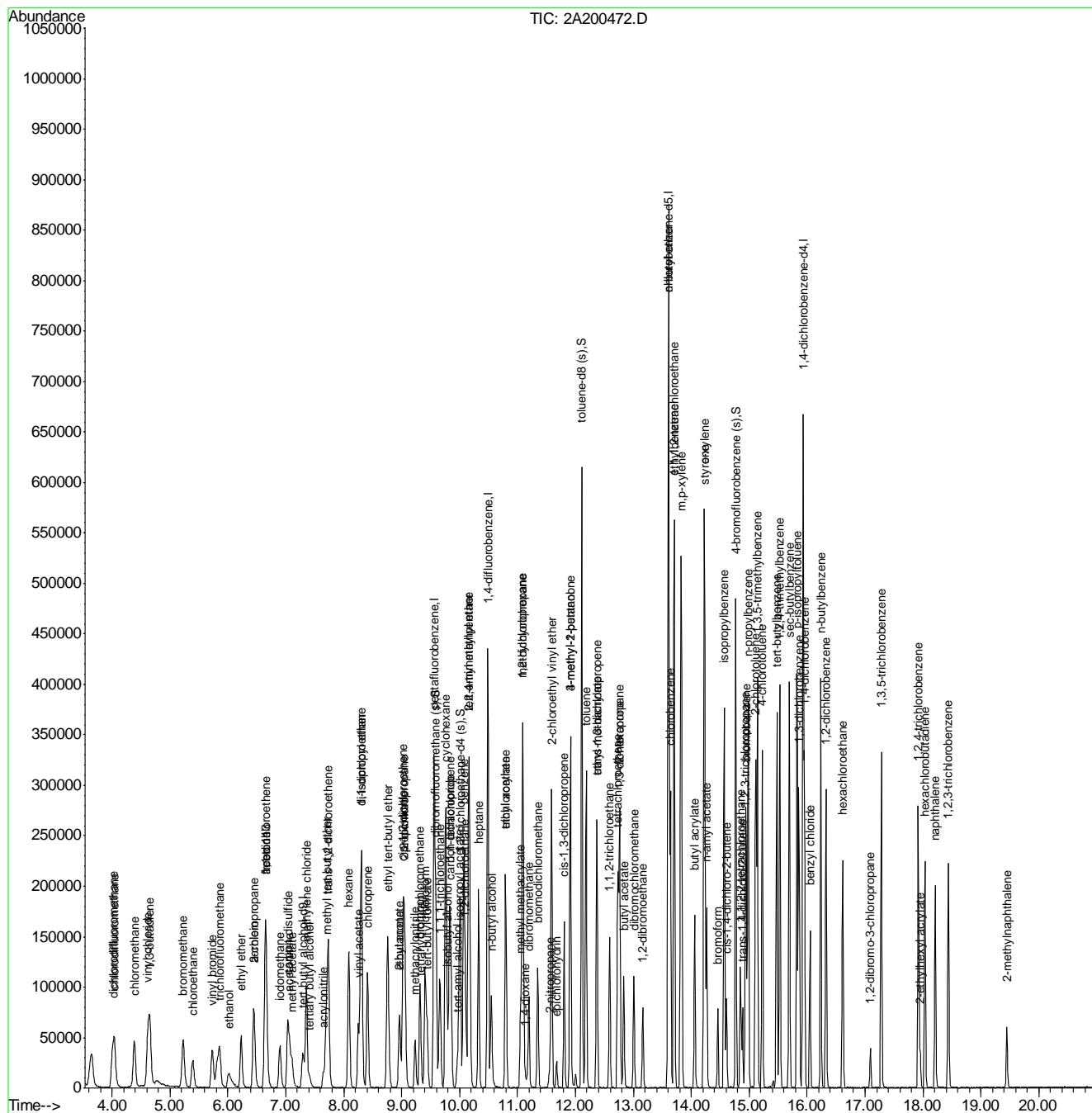
Quant Time: Feb 05 07:47:53 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

Last Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200473.D
 Acq On : 4 Feb 2020 7:32 pm
 Operator : CHELSEAS
 Sample : ICC8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 05 07:47:54 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	70845	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	236920	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	352469	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	300820	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	155140	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	107430	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
53) 1,2-dichloroethane-d4 (s)	10.01	65	116313	50.00	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	100.00%
75) toluene-d8 (s)	12.11	98	382376	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
99) 4-bromofluorobenzene (s)	14.77	95	146797	50.00	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%

Target Compounds

				QValue
2) ethanol	6.01	45	107509	5000.00 ug/L 100
3) tertiary butyl alcohol	7.41	59	50716	250.00 ug/L 100
4) 1,4-dioxane	11.13	88	23858	1250.00 ug/L 100
6) chlorodifluoromethane	4.04	51	165368	50.00 ug/L 100
7) dichlorodifluoromethane	4.01	85	187534	50.00 ug/L 100
8) chloromethane	4.38	50	211447	50.00 ug/L 100
9) vinyl chloride	4.62	62	207723	50.00 ug/L 100
10) 1,3-butadiene	4.65	54	119081	50.00 ug/L 100
11) bromomethane	5.23	94	128111	50.00 ug/L 100
12) chloroethane	5.40	64	105663	50.00 ug/L 100
13) vinyl bromide	5.74	106	112269	50.00 ug/L 100
14) trichlorofluoromethane	5.85	101	216518	50.00 ug/L 100
15) ethyl ether	6.23	74	71206	50.00 ug/L 100
16) 2-chloropropane	6.45	63	56077	50.00 ug/L 100
17) acrolein	6.46	56	19895	50.00 ug/L 100
18) freon 113	6.66	151	101839	50.00 ug/L 100
19) 1,1-dichloroethene	6.65	96	117560	50.00 ug/L 100
20) acetone	6.65	43	110597	200.00 ug/L 100
21) acetonitrile	7.07	41	139774	500.00 ug/L 100
22) iodomethane	6.90	142	175880	50.00 ug/L 100
23) carbon disulfide	7.03	76	339266	50.00 ug/L 100
24) methylene chloride	7.35	84	135577	50.00 ug/L 100
25) methyl acetate	7.11	43	83147	50.00 ug/L 100
26) methyl tert butyl ether	7.71	73	337598	50.00 ug/L 100
27) trans-1,2-dichloroethene	7.73	96	128639	50.00 ug/L 100
28) hexane	8.09	57	204307	50.00 ug/L 100
29) di-isopropyl ether	8.30	45	470715	50.00 ug/L 100
30) ethyl tert-butyl ether	8.76	59	424157	50.00 ug/L 100
31) 2-butanone	8.96	72	46416	200.00 ug/L 100
32) 1,1-dichloroethane	8.31	63	245660	50.00 ug/L 100
33) chloroprene	8.41	53	204200	50.00 ug/L 100
34) acrylonitrile	7.65	53	41436	50.00 ug/L 100
35) vinyl acetate	8.25	86	24375	50.00 ug/L 100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200473.D
 Acq On : 4 Feb 2020 7:32 pm
 Operator : CHELSEAS
 Sample : ICC8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 05 07:47:54 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	8.97	45	16901	50.00	ug/L	100
37) 2,2-dichloropropane	9.05	77	191503	50.00	ug/L	100
38) cis-1,2-dichloroethene	9.02	96	147231	50.00	ug/L	100
39) propionitrile	9.04	54	128363	500.00	ug/L	100
40) bromochloromethane	9.31	130	92301	50.00	ug/L	100
41) tetrahydrofuran	9.33	42	29901	50.00	ug/L	100
42) chloroform	9.40	83	239068	50.00	ug/L	100
43) tert-butyl formate	9.44	59	105955	50.00	ug/L	100
44) isobutyl alcohol	9.79	43	41168	500.00	ug/L	100
46) methacrylonitrile	9.23	67	44758	50.00	ug/L	100
47) 1,1,1-trichloroethane	9.66	97	212287	50.00	ug/L	100
48) cyclohexane	9.76	84	189416	50.00	ug/L	100
49) 1,1-dichloropropene	9.83	75	184845	50.00	ug/L	100
50) tert-amyl alcohol	9.96	73	24887	250.00	ug/L	100
51) carbon tetrachloride	9.85	117	191881	50.00	ug/L	100
54) 2,2,4-trimethylpentane	10.17	57	527170	50.00	ug/L	100
55) tert-amyl methyl ether	10.16	73	398699	50.00	ug/L	100
56) n-butyl alcohol	10.54	56	138735	2500.00	ug/L	100
57) benzene	10.07	78	521888	50.00	ug/L	100
58) heptane	10.33	57	113375	50.00	ug/L	100
59) isopropyl acetate	9.99	87	25239	50.00	ug/L	100
60) 1,2-dichloroethane	10.10	62	177368	50.00	ug/L	100
61) trichloroethene	10.80	95	137233	50.00	ug/L	100
62) ethyl acrylate	10.79	55	150161	50.00	ug/L	100
63) 2-nitropropane	11.56	41	27209	50.00	ug/L	100
64) 2-chloroethyl vinyl ether	11.59	63	316569	250.00	ug/L	100
65) methyl methacrylate	11.06	100	29808	50.00	ug/L	100
66) 1,2-dichloropropane	11.09	63	145201	50.00	ug/L	100
67) methylcyclohexane	11.09	83	233107	50.00	ug/L	100
68) dibromomethane	11.20	93	81182	50.00	ug/L	100
69) bromodichloromethane	11.35	83	188333	50.00	ug/L	100
70) epichlorohydrin	11.67	57	52385	250.00	ug/L	100
71) cis-1,3-dichloropropene	11.80	75	228873	50.00	ug/L	100
72) 4-methyl-2-pentanone	11.91	58	168964	200.00	ug/L	100
73) 3-methyl-1-butanol	11.91	70	51205	1000.00	ug/L	100
76) toluene	12.19	92	313452	50.00	ug/L	100
77) trans-1,3-dichloropropene	12.37	75	197230	50.00	ug/L	100
78) ethyl methacrylate	12.36	69	148986	50.00	ug/L	100
79) 1,1,2-trichloroethane	12.59	83	93923	50.00	ug/L	100
80) 2-hexanone	12.76	58	154022	200.00	ug/L	100
81) tetrachloroethene	12.73	166	142608	50.00	ug/L	100
82) 1,3-dichloropropane	12.77	76	182793	50.00	ug/L	100
83) butyl acetate	12.83	56	76776	50.00	ug/L	100
84) dibromochloromethane	13.01	129	139690	50.00	ug/L	100
85) 1,2-dibromoethane	13.16	107	126639	50.00	ug/L	100
86) n-butyl ether	13.60	57	578772	50.00	ug/L	100
87) chlorobenzene	13.64	112	348561	50.00	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.71	131	135434	50.00	ug/L	100
89) ethylbenzene	13.70	91	575954	50.00	ug/L	100
90) m,p-xylene	13.82	106	451035	100.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200473.D
 Acq On : 4 Feb 2020 7:32 pm
 Operator : CHELSEAS
 Sample : ICC8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Feb 05 07:47:54 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.22	91	467278	50.00	ug/L	100
92) styrene	14.23	104	370213	50.00	ug/L	100
93) n-amyl acetate	14.27	70	83645	50.00	ug/L	100
94) bromoform	14.46	173	87758	50.00	ug/L	100
95) butyl acrylate	14.06	55	248814	50.00	ug/L	100
96) isopropylbenzene	14.57	105	568229	50.00	ug/L	100
97) cis-1,4-dichloro-2-butene	14.61	88	50780	50.00	ug/L	100
100) bromobenzene	14.95	156	156040	50.00	ug/L	100
101) 1,1,2,2-tetrachloroethane	14.85	83	136090	50.00	ug/L	100
102) trans-1,4-dichloro-2-butene	14.88	53	34355	50.00	ug/L	100
103) 1,2,3-trichloropropane	14.93	110	34296	50.00	ug/L	100
104) n-propylbenzene	14.98	91	666925	50.00	ug/L	100
105) 2-chlorotoluene	15.11	126	146321	50.00	ug/L	100
106) 4-chlorotoluene	15.22	91	408417	50.00	ug/L	100
107) 1,3,5-trimethylbenzene	15.14	105	479030	50.00	ug/L	100
108) tert-butylbenzene	15.48	119	408842	50.00	ug/L	100
109) 1,2,4-trimethylbenzene	15.53	105	475991	50.00	ug/L	100
110) sec-butylbenzene	15.70	105	610144	50.00	ug/L	100
111) 1,3-dichlorobenzene	15.86	146	281741	50.00	ug/L	100
112) p-isopropyltoluene	15.83	119	515605	50.00	ug/L	100
113) benzyl chloride	16.05	91	257118	50.00	ug/L	100
114) 1,4-dichlorobenzene	15.96	146	282677	50.00	ug/L	100
115) 1,2-dichlorobenzene	16.33	146	269428	50.00	ug/L	100
116) n-butylbenzene	16.23	92	275787	50.00	ug/L	100
117) 1,2-dibromo-3-chloropropan	17.09	157	27664	50.00	ug/L	100
118) 1,3,5-trichlorobenzene	17.28	180	248970	50.00	ug/L	100
119) 1,2,4-trichlorobenzene	17.92	180	211134	50.00	ug/L	100
120) hexachlorobutadiene	18.04	225	113272	50.00	ug/L	100
121) naphthalene	18.21	128	369765	50.00	ug/L	100
122) 1,2,3-trichlorobenzene	18.44	180	180164	50.00	ug/L	100
123) hexachloroethane	16.62	201	95742	50.00	ug/L	100
124) 2-ethylhexyl acrylate	17.95	70	25160	10.00	ug/L	100
125) 2-methylnaphthalene	19.45	142	84840	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200473.D
Acq On : 4 Feb 2020 7:32 pm
Operator : CHELSEAS
Sample : ICC8671-50
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 9 Sample Multiplier: 1

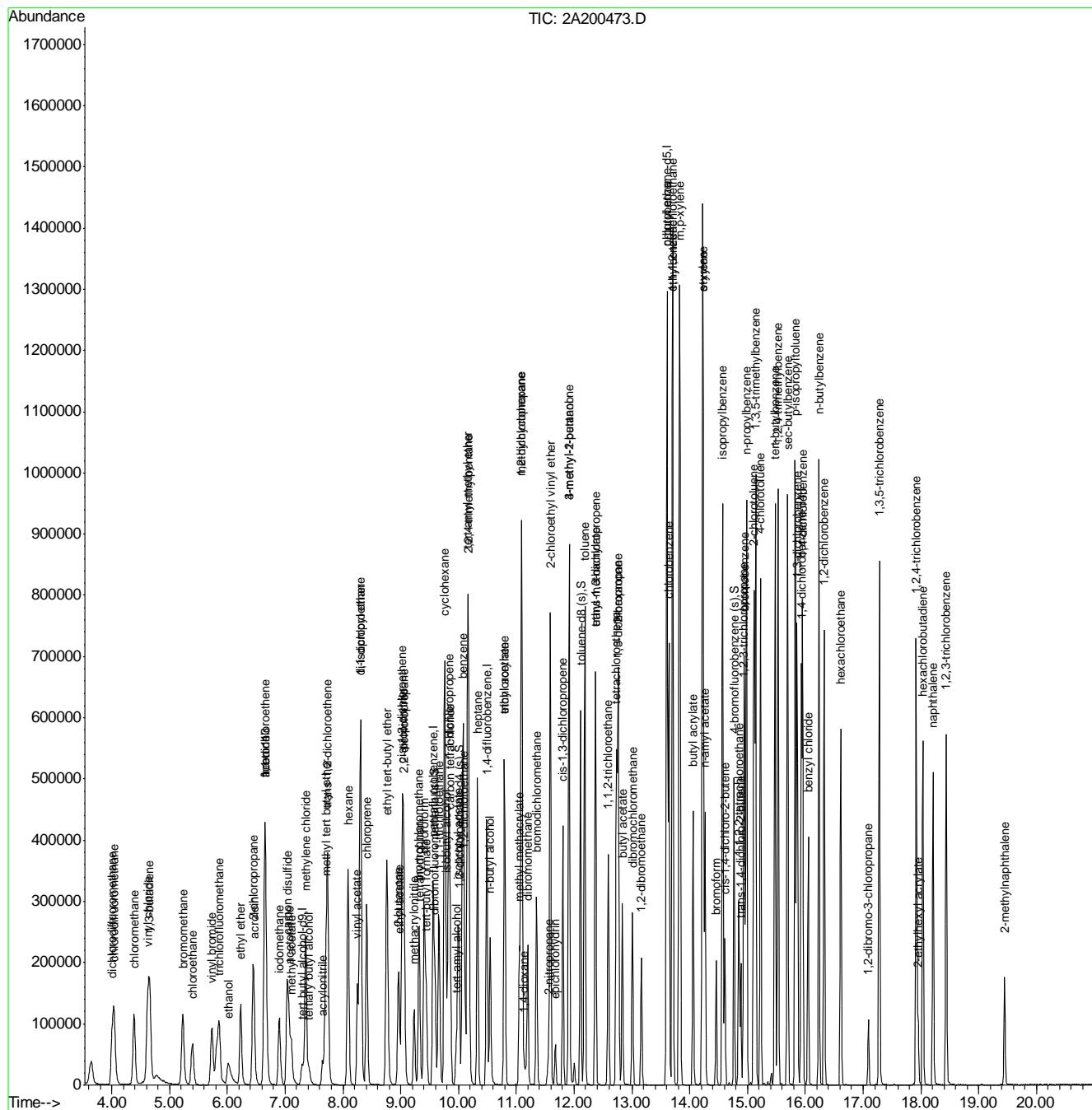
Quant Time: Feb 05 07:47:54 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

Last Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200474.D
 Acq On : 4 Feb 2020 8:01 pm
 Operator : CHELSEAS
 Sample : IC8671-100
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 05 07:47:55 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

7.6.9

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	72143	500.00	ug/L	0.00
5) pentafluorobenzene	9.57	168	240492	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	360479	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	302369	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	157736	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.60	113	108579	49.78	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.56%	
53) 1,2-dichloroethane-d4 (s)	10.02	65	118235	49.70	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 99.40%	
75) toluene-d8 (s)	12.11	98	392109	51.01	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 102.02%	
99) 4-bromofluorobenzene (s)	14.77	95	149230	49.99	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.98%	

Target Compounds

				Qvalue
2) ethanol	6.02	45	232417	10614.71 ug/L 99
3) tertiary butyl alcohol	7.42	59	110823	536.46 ug/L 99
4) 1,4-dioxane	11.13	88	53124	2733.27 ug/L 97
6) chlorodifluoromethane	4.05	51	353716	105.36 ug/L 99
7) dichlorodifluoromethane	4.02	85	384816	101.08 ug/L 99
8) chloromethane	4.39	50	427040	99.48 ug/L 99
9) vinyl chloride	4.62	62	423881	100.51 ug/L 98
10) 1,3-butadiene	4.66	54	259297	107.26 ug/L 96
11) bromomethane	5.23	94	253982	97.65 ug/L 100
12) chloroethane	5.40	64	215375	100.40 ug/L 96
13) vinyl bromide	5.74	106	233867	102.61 ug/L 99
14) trichlorofluoromethane	5.86	101	442120	100.58 ug/L 99
15) ethyl ether	6.24	74	153644	106.28 ug/L 98
16) 2-chloropropane	6.45	63	121423	106.66 ug/L 92
17) acrolein	6.46	56	43753	108.33 ug/L 95
18) freon 113	6.66	151	220254	106.53 ug/L 98
19) 1,1-dichloroethene	6.65	96	253055	106.03 ug/L 98
20) acetone	6.66	43	236388	421.13 ug/L 99
21) acetonitrile	7.08	41	297327	1047.80 ug/L 98
22) iodomethane	6.90	142	383336	107.36 ug/L 99
23) carbon disulfide	7.04	76	733482	106.49 ug/L 99
24) methylene chloride	7.36	84	291692	105.98 ug/L 98
25) methyl acetate	7.11	43	181236	107.37 ug/L 97
26) methyl tert butyl ether	7.71	73	706057	103.02 ug/L 100
27) trans-1,2-dichloroethene	7.74	96	279218	106.92 ug/L 98
28) hexane	8.09	57	433505	104.52 ug/L 99
29) di-isopropyl ether	8.31	45	995093	104.13 ug/L 99
30) ethyl tert-butyl ether	8.76	59	885447	102.83 ug/L 100
31) 2-butanone	8.96	72	99151	420.88 ug/L # 87
32) 1,1-dichloroethane	8.32	63	522828	104.83 ug/L 99
33) chloroprene	8.41	53	436804	105.37 ug/L 99
34) acrylonitrile	7.65	53	90941	108.11 ug/L 94
35) vinyl acetate	8.25	86	53916	108.95 ug/L # 91

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200474.D
 Acq On : 4 Feb 2020 8:01 pm
 Operator : CHELSEAS
 Sample : IC8671-100
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 05 07:47:55 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	8.97	45	36733	107.06	ug/L	95
37) 2,2-dichloropropane	9.05	77	407594	104.84	ug/L	98
38) cis-1,2-dichloroethene	9.03	96	314249	105.13	ug/L	96
39) propionitrile	9.04	54	272183	1044.46	ug/L	84
40) bromochloromethane	9.32	130	199351	106.39	ug/L	100
41) tetrahydrofuran	9.34	42	65589	108.05	ug/L	97
42) chloroform	9.41	83	509796	105.04	ug/L	99
43) tert-butyl formate	9.45	59	231618	107.68	ug/L	98
44) isobutyl alcohol	9.80	43	92452	1106.18	ug/L #	72
46) methacrylonitrile	9.24	67	97928	107.77	ug/L	96
47) 1,1,1-trichloroethane	9.66	97	451836	104.84	ug/L	95
48) cyclohexane	9.77	84	397755	103.44	ug/L	94
49) 1,1-dichloropropene	9.83	75	396715	105.72	ug/L	99
50) tert-amyl alcohol	9.96	73	55045	544.74	ug/L	93
51) carbon tetrachloride	9.86	117	410386	105.35	ug/L	100
54) 2,2,4-trimethylpentane	10.17	57	1112684	103.19	ug/L	99
55) tert-amyl methyl ether	10.16	73	830568	101.85	ug/L	98
56) n-butyl alcohol	10.55	56	296632	5226.52	ug/L	97
57) benzene	10.08	78	1106246	103.63	ug/L	99
58) heptane	10.33	57	243667	105.07	ug/L	98
59) isopropyl acetate	9.99	87	54669	105.90	ug/L	97
60) 1,2-dichloroethane	10.10	62	375471	103.49	ug/L	99
61) trichloroethene	10.80	95	294989	105.09	ug/L	97
62) ethyl acrylate	10.79	55	320660	104.40	ug/L	99
63) 2-nitropropane	11.56	41	59271	106.50	ug/L	98
64) 2-chloroethyl vinyl ether	11.59	63	676553	522.41	ug/L	99
65) methyl methacrylate	11.06	100	64295	105.45	ug/L	98
66) 1,2-dichloropropane	11.09	63	308308	103.81	ug/L	98
67) methylcyclohexane	11.09	83	496999	104.23	ug/L	100
68) dibromomethane	11.20	93	173146	104.27	ug/L	99
69) bromodichloromethane	11.35	83	405872	105.36	ug/L	100
70) epichlorohydrin	11.67	57	112586	525.36	ug/L	98
71) cis-1,3-dichloropropene	11.80	75	488886	104.43	ug/L	100
72) 4-methyl-2-pentanone	11.91	58	355793	411.79	ug/L	97
73) 3-methyl-1-butanol	11.91	70	112156	2141.66	ug/L	96
76) toluene	12.19	92	670734	106.44	ug/L	97
77) trans-1,3-dichloropropene	12.37	75	422461	106.55	ug/L	99
78) ethyl methacrylate	12.36	69	320318	106.95	ug/L	99
79) 1,1,2-trichloroethane	12.59	83	200976	106.44	ug/L	99
80) 2-hexanone	12.76	58	322557	416.70	ug/L	96
81) tetrachloroethene	12.74	166	304884	106.35	ug/L	98
82) 1,3-dichloropropane	12.77	76	389568	106.01	ug/L	99
83) butyl acetate	12.83	56	165093	106.97	ug/L	97
84) dibromochloromethane	13.01	129	300684	107.07	ug/L	98
85) 1,2-dibromoethane	13.16	107	264985	104.09	ug/L	100
86) n-butyl ether	13.60	57	1205661	103.62	ug/L	99
87) chlorobenzene	13.64	112	731660	104.42	ug/L	97
88) 1,1,1,2-tetrachloroethane	13.71	131	290654	106.75	ug/L	97
89) ethylbenzene	13.70	91	1202553	103.86	ug/L	98
90) m,p-xylene	13.82	106	954557	210.55	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200474.D
 Acq On : 4 Feb 2020 8:01 pm
 Operator : CHELSEAS
 Sample : IC8671-100
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 05 07:47:55 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) o-xylene	14.22	91	976008	103.90	ug/L	99
92) styrene	14.24	104	783878	105.33	ug/L	96
93) n-amyl acetate	14.27	70	177997	105.86	ug/L	99
94) bromoform	14.46	173	190803	108.15	ug/L	100
95) butyl acrylate	14.06	55	523970	104.75	ug/L	100
96) isopropylbenzene	14.57	105	1185158	103.75	ug/L	99
97) cis-1,4-dichloro-2-butene	14.61	88	109021	106.80	ug/L	97
100) bromobenzene	14.95	156	328579	103.55	ug/L	99
101) 1,1,2,2-tetrachloroethane	14.85	83	285829	103.29	ug/L	98
102) trans-1,4-dichloro-2-butene	14.88	53	73782	105.61	ug/L	94
103) 1,2,3-trichloropropane	14.93	110	72346	103.74	ug/L	97
104) n-propylbenzene	14.98	91	1378566	101.65	ug/L	99
105) 2-chlorotoluene	15.11	126	311368	104.65	ug/L	96
106) 4-chlorotoluene	15.22	91	862527	103.86	ug/L	99
107) 1,3,5-trimethylbenzene	15.14	105	1005210	103.19	ug/L	98
108) tert-butylbenzene	15.48	119	852806	102.58	ug/L	99
109) 1,2,4-trimethylbenzene	15.53	105	999219	103.23	ug/L	98
110) sec-butylbenzene	15.70	105	1269504	102.32	ug/L	98
111) 1,3-dichlorobenzene	15.86	146	594624	103.79	ug/L	98
112) p-isopropyltoluene	15.83	119	1078685	102.88	ug/L	97
113) benzyl chloride	16.05	91	544018	104.05	ug/L	100
114) 1,4-dichlorobenzene	15.96	146	600789	104.52	ug/L	99
115) 1,2-dichlorobenzene	16.33	146	570009	104.04	ug/L	98
116) n-butylbenzene	16.23	92	585239	104.36	ug/L	98
117) 1,2-dibromo-3-chloropropan	17.09	157	59408	105.61	ug/L	92
118) 1,3,5-trichlorobenzene	17.28	180	520934	102.90	ug/L	98
119) 1,2,4-trichlorobenzene	17.92	180	448099	104.37	ug/L	98
120) hexachlorobutadiene	18.04	225	244239	106.04	ug/L	98
121) naphthalene	18.21	128	780229	103.77	ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	385309	105.17	ug/L	96
123) hexachloroethane	16.62	201	209830	107.78	ug/L	98
124) 2-ethylhexyl acrylate	17.95	70	61726	24.13	ug/L	94
125) 2-methylnaphthalene	19.45	142	190657	55.26	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
Data File : 2A200474.D
Acq On : 4 Feb 2020 8:01 pm
Operator : CHELSEAS
Sample : IC8671-100
Misc : MS40388,V2A8671,w,,,1
ALS Vial : 10 Sample Multiplier: 1

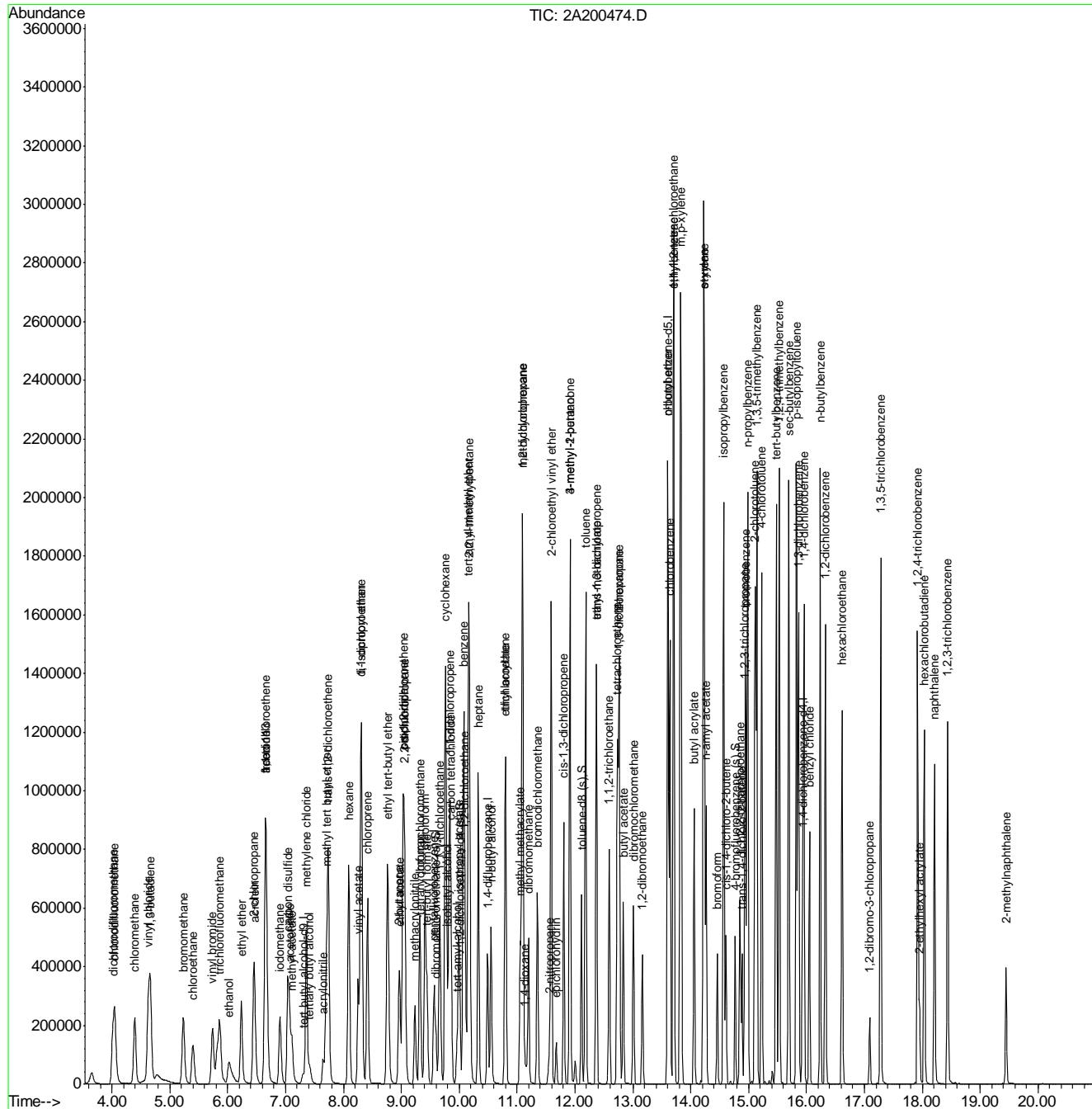
Quant Time: Feb 05 07:47:55 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 07:47:36 2020

QLast Update : Wed Feb 05 07:47:36 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200475.D
 Acq On : 4 Feb 2020 8:30 pm
 Operator : CHELSEAS
 Sample : IC8671-200
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 06 10:46:38 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 09:46:56 2020

QLast Update : Wed Feb 05 09:46:56 2020

Response via : Initial Calibration

7.6.10

7

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	73099	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	247103	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	374245	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	303610	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	161323	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	113088	50.35	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.70%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	120642	48.58	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 97.16%	
75) toluene-d8 (s)	12.11	98	401748	52.13	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 104.26%	
99) 4-bromofluorobenzene (s)	14.77	95	153427	50.44	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.88%	

Target Compounds

					Qvalue
2) ethanol	6.02	45	447511	20340.26	ug/L 99
3) tertiary butyl alcohol	7.42	59	215752	1024.23	ug/L 86
4) 1,4-dioxane	11.13	88	104114	5198.47	ug/L 97
6) chlorodifluoromethane	4.04	51	646138	186.31	ug/L 100
7) dichlorodifluoromethane	4.01	85	742394	199.56	ug/L 99
8) chloromethane	4.38	50	824489	181.50	ug/L 99
9) vinyl chloride	4.61	62	819471	191.66	ug/L 98
10) 1,3-butadiene	4.65	54	472290	189.19	ug/L 95
11) bromomethane	5.22	94	482553	171.41	ug/L 99
12) chloroethane	5.39	64	422531	192.62	ug/L 97
13) vinyl bromide	5.73	106	455029	202.11	ug/L 100
14) trichlorofluoromethane	5.85	101	859044	192.72	ug/L 97
15) ethyl ether	6.23	74	295293	198.04	ug/L 95
16) 2-chloropropane	6.44	63	233276	196.78	ug/L 96
17) acrolein	6.45	56	84596	213.95	ug/L 98
18) freon 113	6.65	151	417870	200.73	ug/L 98
19) 1,1-dichloroethene	6.65	96	481480	199.81	ug/L 99
20) acetone	6.65	43	451666	779.24	ug/L 100
21) acetonitrile	7.07	41	575355	1947.38	ug/L 99
22) iodomethane	6.89	142	730041	194.98	ug/L 99
24) methylene chloride	7.35	84	558762	192.38	ug/L 99
25) methyl acetate	7.11	43	349706	197.24	ug/L 99
26) methyl tert butyl ether	7.71	73	1340950	189.78	ug/L 99
27) trans-1,2-dichloroethene	7.73	96	535308	194.08	ug/L 97
28) hexane	8.09	57	833111	207.48	ug/L 99
29) di-isopropyl ether	8.30	45	1868803	188.79	ug/L 99
30) ethyl tert-butyl ether	8.76	59	1659831	184.29	ug/L 98
31) 2-butanone	8.96	72	194733	824.55	ug/L # 90
32) 1,1-dichloroethane	8.31	63	998107	194.34	ug/L 99
33) chloroprene	8.41	53	841951	201.01	ug/L 98
34) acrylonitrile	7.64	53	175862	206.96	ug/L 99
35) vinyl acetate	8.25	86	107048	211.18	ug/L # 94
36) ethyl acetate	8.97	45	71903	205.53	ug/L 93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200475.D
 Acq On : 4 Feb 2020 8:30 pm
 Operator : CHELSEAS
 Sample : IC8671-200
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 06 10:46:38 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 09:46:56 2020

QLast Update : Wed Feb 05 09:46:56 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	9.05	77	766963	185.84	ug/L	98
38) cis-1,2-dichloroethene	9.02	96	608253	193.50	ug/L	98
39) propionitrile	9.04	54	526188	1976.39	ug/L	98
40) bromochloromethane	9.31	130	386677	199.64	ug/L	99
41) tetrahydrofuran	9.34	42	125948	198.98	ug/L	98
42) chloroform	9.40	83	976562	192.21	ug/L	99
43) tert-butyl formate	9.44	59	438573	194.17	ug/L	100
44) isobutyl alcohol	9.80	43	179855	2118.86	ug/L	# 64
46) methacrylonitrile	9.24	67	192002	203.37	ug/L	99
47) 1,1,1-trichloroethane	9.66	97	866096	199.15	ug/L	95
48) cyclohexane	9.77	84	775869	192.72	ug/L	88
49) 1,1-dichloropropene	9.83	75	765625	196.93	ug/L	100
50) tert-amyl alcohol	9.96	73	108369	1040.95	ug/L	97
51) carbon tetrachloride	9.85	117	791761	196.71	ug/L	100
54) 2,2,4-trimethylpentane	10.17	57	2076288	195.43	ug/L	98
55) tert-amyl methyl ether	10.16	73	1539708	181.12	ug/L	98
56) n-butyl alcohol	10.55	56	585011	10157.69	ug/L	100
57) benzene	10.08	78	2083987	183.99	ug/L	97
58) heptane	10.33	57	470224	207.99	ug/L	98
59) isopropyl acetate	9.99	87	107987	208.88	ug/L	96
60) 1,2-dichloroethane	10.10	62	720216	182.21	ug/L	100
61) trichloroethene	10.80	95	574208	195.19	ug/L	99
62) ethyl acrylate	10.79	55	618644	200.50	ug/L	99
63) 2-nitropropane	11.56	41	117375	210.19	ug/L	98
64) 2-chloroethyl vinyl ether	11.59	63	1294248	999.02	ug/L	96
65) methyl methacrylate	11.06	100	126595	206.42	ug/L	95
66) 1,2-dichloropropane	11.09	63	590532	192.77	ug/L	99
67) methylcyclohexane	11.09	83	945099	202.08	ug/L	99
68) dibromomethane	11.20	93	337929	197.26	ug/L	98
69) bromodichloromethane	11.35	83	781086	197.07	ug/L	99
70) epichlorohydrin	11.68	57	222829	995.23	ug/L	96
71) cis-1,3-dichloropropene	11.80	75	940100	197.52	ug/L	99
72) 4-methyl-2-pentanone	11.91	58	689033	770.27	ug/L	91
73) 3-methyl-1-butanol	11.91	70	221058	4188.43	ug/L	95
76) toluene	12.19	92	1286045	198.21	ug/L	92
77) trans-1,3-dichloropropene	12.37	75	811243	208.91	ug/L	97
78) ethyl methacrylate	12.36	69	624128	211.77	ug/L	99
79) 1,1,2-trichloroethane	12.59	83	391263	206.16	ug/L	98
80) 2-hexanone	12.76	58	625161	818.62	ug/L	95
81) tetrachloroethene	12.74	166	589093	201.63	ug/L	98
82) 1,3-dichloropropane	12.77	76	743833	200.38	ug/L	99
83) butyl acetate	12.83	56	322026	206.28	ug/L	96
84) dibromochloromethane	13.01	129	581157	210.01	ug/L	100
85) 1,2-dibromoethane	13.16	107	512548	206.95	ug/L	97
86) n-butyl ether	13.60	57	2190321	192.13	ug/L	97
87) chlorobenzene	13.64	112	1377913	195.39	ug/L	96
88) 1,1,1,2-tetrachloroethane	13.71	131	549017	203.59	ug/L	97
89) ethylbenzene	13.70	91	2160118	182.79	ug/L	93
90) m,p-xylene	13.82	106	1791995	396.09	ug/L	87
91) o-xylene	14.22	91	1787937	186.05	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200475.D
 Acq On : 4 Feb 2020 8:30 pm
 Operator : CHELSEAS
 Sample : IC8671-200
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 06 10:46:38 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 09:46:56 2020

QLast Update : Wed Feb 05 09:46:56 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
92) styrene	14.24	104	1452348	199.29	ug/L	99
93) n-amyl acetate	14.27	70	352471	213.86	ug/L	96
94) bromoform	14.46	173	373437	221.04	ug/L	100
95) butyl acrylate	14.06	55	1001432	208.32	ug/L	97
96) isopropylbenzene	14.57	105	2157901	188.05	ug/L	94
97) cis-1,4-dichloro-2-butene	14.61	88	214481	221.76	ug/L	98
100) bromobenzene	14.95	156	625497	195.01	ug/L	99
101) 1,1,2,2-tetrachloroethane	14.85	83	546488	197.52	ug/L	98
102) trans-1,4-dichloro-2-butene	14.88	53	145730	209.54	ug/L	94
103) 1,2,3-trichloropropane	14.94	110	139118	193.66	ug/L	99
104) n-propylbenzene	14.98	91	2458840	176.20	ug/L	94
105) 2-chlorotoluene	15.11	126	591061	194.17	ug/L	95
106) 4-chlorotoluene	15.22	91	1598452	187.13	ug/L	98
107) 1,3,5-trimethylbenzene	15.14	105	1829032	186.78	ug/L	94
108) tert-butylbenzene	15.48	119	1583583	191.24	ug/L	96
109) 1,2,4-trimethylbenzene	15.53	105	1832160	187.19	ug/L	95
110) sec-butylbenzene	15.70	105	2273677	181.00	ug/L	94
111) 1,3-dichlorobenzene	15.86	146	1106422	190.79	ug/L	93
112) p-isopropyltoluene	15.83	119	1954304	187.39	ug/L	94
113) benzyl chloride	16.05	91	1031680	201.56	ug/L	97
114) 1,4-dichlorobenzene	15.96	146	1121970	187.49	ug/L	97
115) 1,2-dichlorobenzene	16.33	146	1063547	191.68	ug/L	96
116) n-butylbenzene	16.24	92	1097440	197.12	ug/L	92
117) 1,2-dibromo-3-chloropropan	17.09	157	116580	214.45	ug/L	96
118) 1,3,5-trichlorobenzene	17.28	180	956630	194.81	ug/L	98
119) 1,2,4-trichlorobenzene	17.92	180	832594	203.07	ug/L	98
120) hexachlorobutadiene	18.04	225	439839	195.22	ug/L	98
121) naphthalene	18.21	128	1460052	207.06	ug/L	98
122) 1,2,3-trichlorobenzene	18.44	180	711055	201.98	ug/L	98
123) hexachloroethane	16.62	201	402590	213.89	ug/L	99
124) 2-ethylhexyl acrylate	17.95	70	119536	39.55	ug/L	94
125) 2-methylnaphthalene	19.45	142	371833	110.94	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671
Data File : 2A200475.D
Acq On : 4 Feb 2020 8:30 pm
Operator : CHELSEAS
Sample : IC8671-200
Misc : MS40388,V2A8671,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

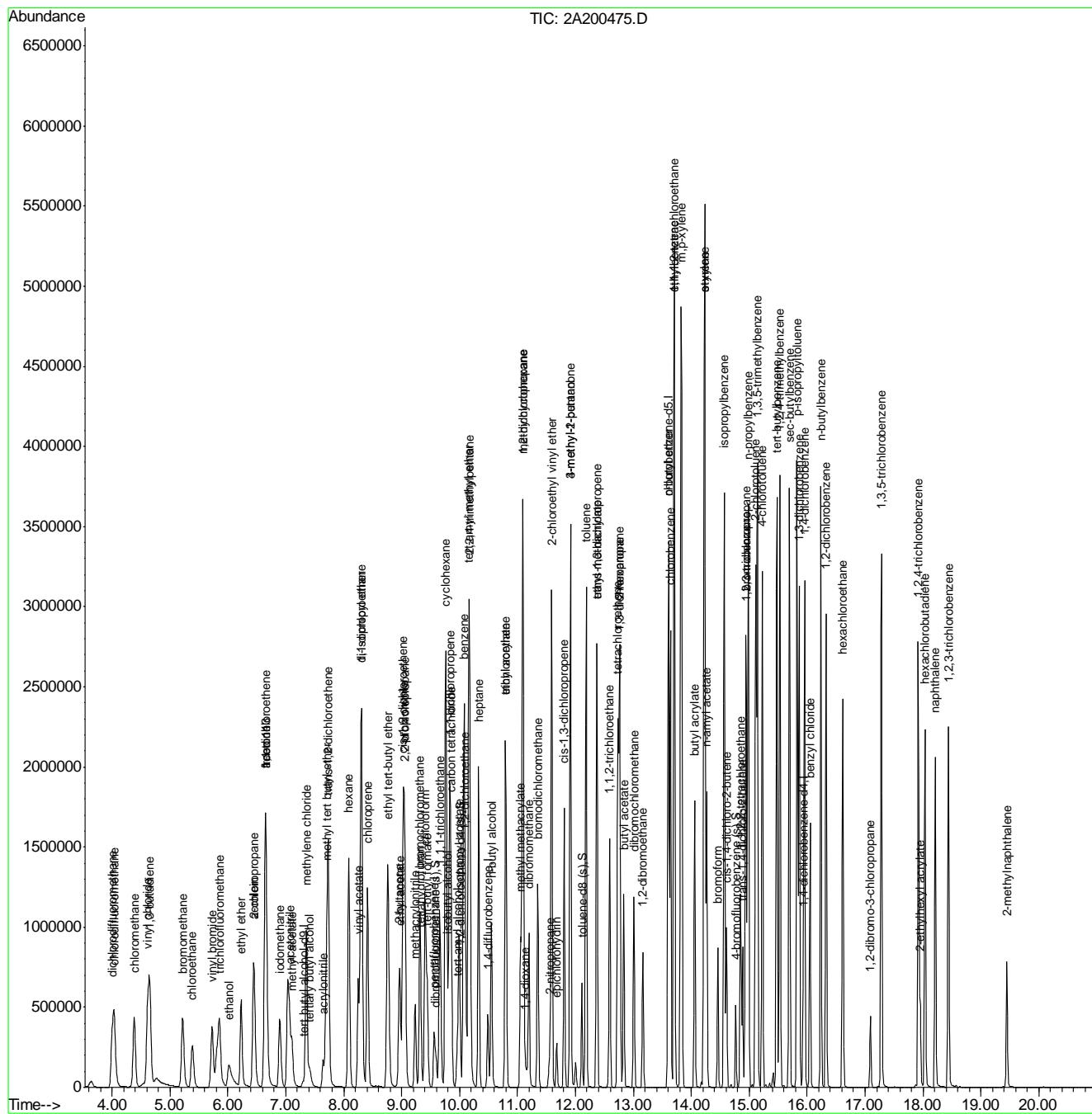
Quant Time: Feb 06 10:46:38 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Wed Feb 05 09:46:56 2020

Last Update : Wed Feb 05 09:46:56 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200478.D
 Acq On : 4 Feb 2020 9:55 pm
 Operator : CHELSEAS
 Sample : ICV8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 06 10:51:08 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

7.6.11

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	75328	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	246730	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	373927	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	317146	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	165027	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	112637	50.23	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.46%	
53) 1,2-dichloroethane-d4 (s)	10.01	65	122434	49.34	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 98.68%	
75) toluene-d8 (s)	12.11	98	407549	50.62	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 101.24%	
99) 4-bromofluorobenzene (s)	14.76	95	153121	49.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.42%	

Target Compounds

				QValue
2) ethanol	6.01	45	114727	5060.27 ug/L 100
3) tertiary butyl alcohol	7.41	59	52112	240.07 ug/L 96
4) 1,4-dioxane	11.13	88	26658	1291.66 ug/L 94
7) dichlorodifluoromethane	4.01	85	153153	41.23 ug/L 99
8) chloromethane	4.38	50	196736	43.90 ug/L 99
9) vinyl chloride	4.61	62	191448	44.84 ug/L 99
10) 1,3-butadiene	4.65	54	157757	63.29 ug/L 100
11) bromomethane	5.22	94	153853	54.73 ug/L 98
12) chloroethane	5.39	64	95346	43.53 ug/L 97
13) vinyl bromide	5.73	106	130184	57.91 ug/L 98
14) trichlorofluoromethane	5.85	101	210318	47.26 ug/L 97
15) ethyl ether	6.23	74	75684	50.84 ug/L 99
16) 2-chloropropane	6.44	63	58797	49.67 ug/L 91
17) acrolein	6.46	56	20227	51.23 ug/L 94
18) freon 113	6.66	151	104181	50.12 ug/L 98
19) 1,1-dichloroethene	6.65	96	118249	49.15 ug/L 95
20) acetone	6.65	43	115759	200.02 ug/L 98
22) iodomethane	6.90	142	243138	65.03 ug/L 98
23) carbon disulfide	7.03	76	437733	59.96 ug/L 98
24) methylene chloride	7.35	84	141569	48.82 ug/L 98
25) methyl acetate	7.11	43	82730	46.73 ug/L 100
26) methyl tert butyl ether	7.70	73	684911	97.08 ug/L 99
27) trans-1,2-dichloroethene	7.74	96	135662	49.26 ug/L 100
28) hexane	8.09	57	165734	41.34 ug/L 99
29) di-isopropyl ether	8.30	45	465862	47.13 ug/L 99
30) ethyl tert-butyl ether	8.75	59	418454	46.53 ug/L 98
31) 2-butanone	8.96	72	47404	201.02 ug/L 94
32) 1,1-dichloroethane	8.31	63	259538	49.43 ug/L 100
33) chloroprene	8.41	53	215871	51.62 ug/L 99
35) vinyl acetate	8.25	86	25124	49.64 ug/L # 86
36) ethyl acetate	8.97	45	16450	47.09 ug/L 95
37) 2,2-dichloropropane	9.05	77	186474	45.25 ug/L 97
38) cis-1,2-dichloroethene	9.02	96	148459	47.30 ug/L 99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200478.D
 Acq On : 4 Feb 2020 9:55 pm
 Operator : CHELSEAS
 Sample : ICV8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 06 10:51:08 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	9.04	54	152315	572.97	ug/L	97
40) bromochloromethane	9.31	130	96658	49.98	ug/L	97
41) tetrahydrofuran	9.34	42	31677	50.12	ug/L	96
42) chloroform	9.40	83	248429	48.97	ug/L	98
43) tert-butyl formate	9.44	59	117383	52.05	ug/L	98
44) isobutyl alcohol	9.80	43	42364	499.84	ug/L #	69
46) methacrylonitrile	9.23	67	49201	52.19	ug/L	97
47) 1,1,1-trichloroethane	9.66	97	215650	48.85	ug/L	97
48) cyclohexane	9.76	84	190692	47.44	ug/L	96
49) 1,1-dichloropropene	9.83	75	191453	49.32	ug/L	99
50) tert-amyl alcohol	9.96	73	25709	247.32	ug/L	93
51) carbon tetrachloride	9.85	117	200748	49.95	ug/L	98
54) 2,2,4-trimethylpentane	10.17	57	525158	49.47	ug/L	99
55) tert-amyl methyl ether	10.16	73	377245	44.41	ug/L	99
56) n-butyl alcohol	10.54	56	141903	2465.99	ug/L	100
57) benzene	10.07	78	547937	48.42	ug/L	99
58) heptane	10.33	57	110979	49.13	ug/L	97
59) isopropyl acetate	9.99	87	24828	48.07	ug/L	97
60) 1,2-dichloroethane	10.10	62	180320	45.66	ug/L	98
61) trichloroethylene	10.80	95	144582	49.19	ug/L	99
62) ethyl acrylate	10.79	55	150100	48.69	ug/L	99
63) 2-nitropropane	11.56	41	29222	52.37	ug/L	96
64) 2-chloroethyl vinyl ether	11.59	63	345815	267.16	ug/L	99
65) methyl methacrylate	11.05	100	31506	51.42	ug/L #	73
66) 1,2-dichloropropane	11.09	63	148064	48.37	ug/L	99
67) methylcyclohexane	11.09	83	236758	50.67	ug/L	99
68) dibromomethane	11.19	93	82116	47.97	ug/L	96
69) bromodichloromethane	11.35	83	191331	48.31	ug/L	98
70) epichlorohydrin	11.67	57	55159	246.57	ug/L	97
71) cis-1,3-dichloropropene	11.80	75	236321	49.69	ug/L	100
72) 4-methyl-2-pentanone	11.91	58	172811	193.35	ug/L	99
73) 3-methyl-1-butanol	11.91	70	52326	992.28	ug/L	98
76) toluene	12.18	92	327933	48.39	ug/L	99
77) trans-1,3-dichloropropene	12.37	75	208423	51.38	ug/L	99
78) ethyl methacrylate	12.36	69	161029	52.31	ug/L	99
79) 1,1,2-trichloroethane	12.59	83	99581	50.23	ug/L	97
80) 2-hexanone	12.76	58	155063	194.38	ug/L	99
82) 1,3-dichloropropane	12.77	76	190427	49.11	ug/L	99
83) butyl acetate	12.83	56	79112	48.51	ug/L	99
84) dibromochloromethane	13.01	129	148939	51.53	ug/L	98
85) 1,2-dibromoethane	13.16	107	133134	51.46	ug/L	100
86) n-butyl ether	13.60	57	577587	48.50	ug/L	100
87) chlorobenzene	13.64	112	365679	49.64	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.71	131	140131	49.75	ug/L	99
89) ethylbenzene	13.70	91	596131	48.29	ug/L	100
90) m,p-xylene	13.82	106	468435	99.12	ug/L	98
91) o-xylene	14.22	91	479146	47.73	ug/L	99
92) styrene	14.23	104	384068	50.45	ug/L	98
93) n-amyl acetate	14.27	70	80480	46.75	ug/L	100
94) bromoform	14.46	173	97229	55.09	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200478.D
 Acq On : 4 Feb 2020 9:55 pm
 Operator : CHELSEAS
 Sample : ICV8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Feb 06 10:51:08 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) butyl acrylate	14.06	55	249141	49.61	ug/L	100
96) isopropylbenzene	14.57	105	584498	48.76	ug/L	99
97) cis-1,4-dichloro-2-butene	14.61	88	52694	52.16	ug/L	93
100) bromobenzene	14.95	156	160619	48.95	ug/L	97
101) 1,1,2,2-tetrachloroethane	14.85	83	140047	49.48	ug/L	100
102) trans-1,4-dichloro-2-butene	14.88	53	34216	48.09	ug/L	97
103) 1,2,3-trichloropropane	14.93	110	34735	47.27	ug/L	99
104) n-propylbenzene	14.98	91	695223	48.70	ug/L	99
105) 2-chlorotoluene	15.11	126	147359	47.32	ug/L	99
106) 4-chlorotoluene	15.22	91	428609	49.05	ug/L	99
107) 1,3,5-trimethylbenzene	15.14	105	489298	48.85	ug/L	98
108) tert-butylbenzene	15.48	119	416799	49.21	ug/L	99
109) 1,2,4-trimethylbenzene	15.53	105	501712	50.11	ug/L	95
110) sec-butylbenzene	15.70	105	630625	49.08	ug/L	100
111) 1,3-dichlorobenzene	15.86	146	297589	50.16	ug/L	99
112) p-isopropyltoluene	15.83	119	538151	50.44	ug/L	100
113) benzyl chloride	16.05	91	197224	37.14	ug/L	99
114) 1,4-dichlorobenzene	15.96	146	296006	48.36	ug/L	100
115) 1,2-dichlorobenzene	16.33	146	283166	49.89	ug/L	99
116) n-butylbenzene	16.23	92	284243	49.91	ug/L	99
117) 1,2-dibromo-3-chloropropan	17.09	157	26230	47.17	ug/L	98
118) 1,3,5-trichlorobenzene	17.28	180	260903	51.94	ug/L	99
119) 1,2,4-trichlorobenzene	17.92	180	214254	51.08	ug/L	100
120) hexachlorobutadiene	18.04	225	112657	48.88	ug/L	98
121) naphthalene	18.21	128	375342	52.03	ug/L	99
122) 1,2,3-trichlorobenzene	18.44	180	181720	50.46	ug/L	98
123) hexachloroethane	16.62	201	99589	51.72	ug/L	96
124) 2-ethylhexyl acrylate	17.95	70	28180	9.82	ug/L	94
125) 2-methylnaphthalene	19.45	142	86256	25.16	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671
Data File : 2A200478.D
Acq On : 4 Feb 2020 9:55 pm
Operator : CHELSEAS
Sample : ICV8671-50
Misc : MS40388,V2A8671,w,,,.1
ALS Vial : 14 Sample Multiplier: 1

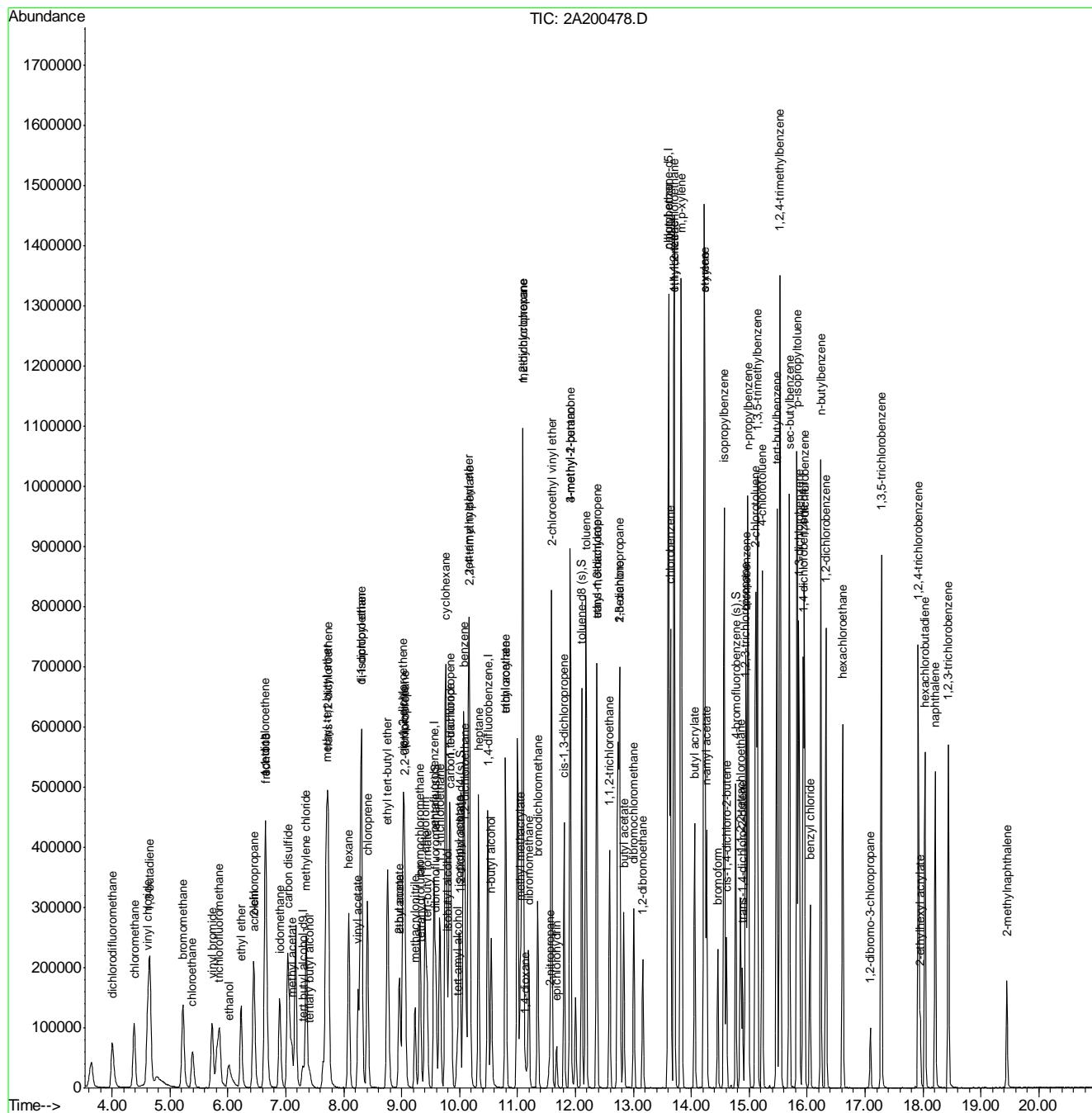
Quant Time: Feb 06 10:51:08 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

Last Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200479.D
 Acq On : 4 Feb 2020 10:24 pm
 Operator : CHELSEAS
 Sample : ICV8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Feb 06 10:51:32 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

7.6.12

7

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	7.30	65	75739	500.00	ug/L	0.00
5) pentafluorobenzene	9.56	168	247018	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.49	114	368131	50.00	ug/L	0.00
74) chlorobenzene-d5	13.61	117	316671	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.93	152	162015	50.00	ug/L	0.00

System Monitoring Compounds

45) dibromofluoromethane (s)	9.59	113	112038	49.90	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.80%
53) 1,2-dichloroethane-d4 (s)	10.01	65	125328	51.31	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	102.62%
75) toluene-d8 (s)	12.11	98	398270	49.55	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.10%
99) 4-bromofluorobenzene (s)	14.76	95	154254	50.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.00%

Target Compounds

Qvalue

21) acetonitrile	7.07	41	138223	468.00	ug/L	99
34) acrylonitrile	7.64	53	40440	47.61	ug/L	94
81) tetrachloroethene	12.73	166	155096	50.90	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V2A8671\
 Data File : 2A200479.D
 Acq On : 4 Feb 2020 10:24 pm
 Operator : CHELSEAS
 Sample : ICV8671-50
 Misc : MS40388,V2A8671,w,,,1
 ALS Vial : 15 Sample Multiplier: 1

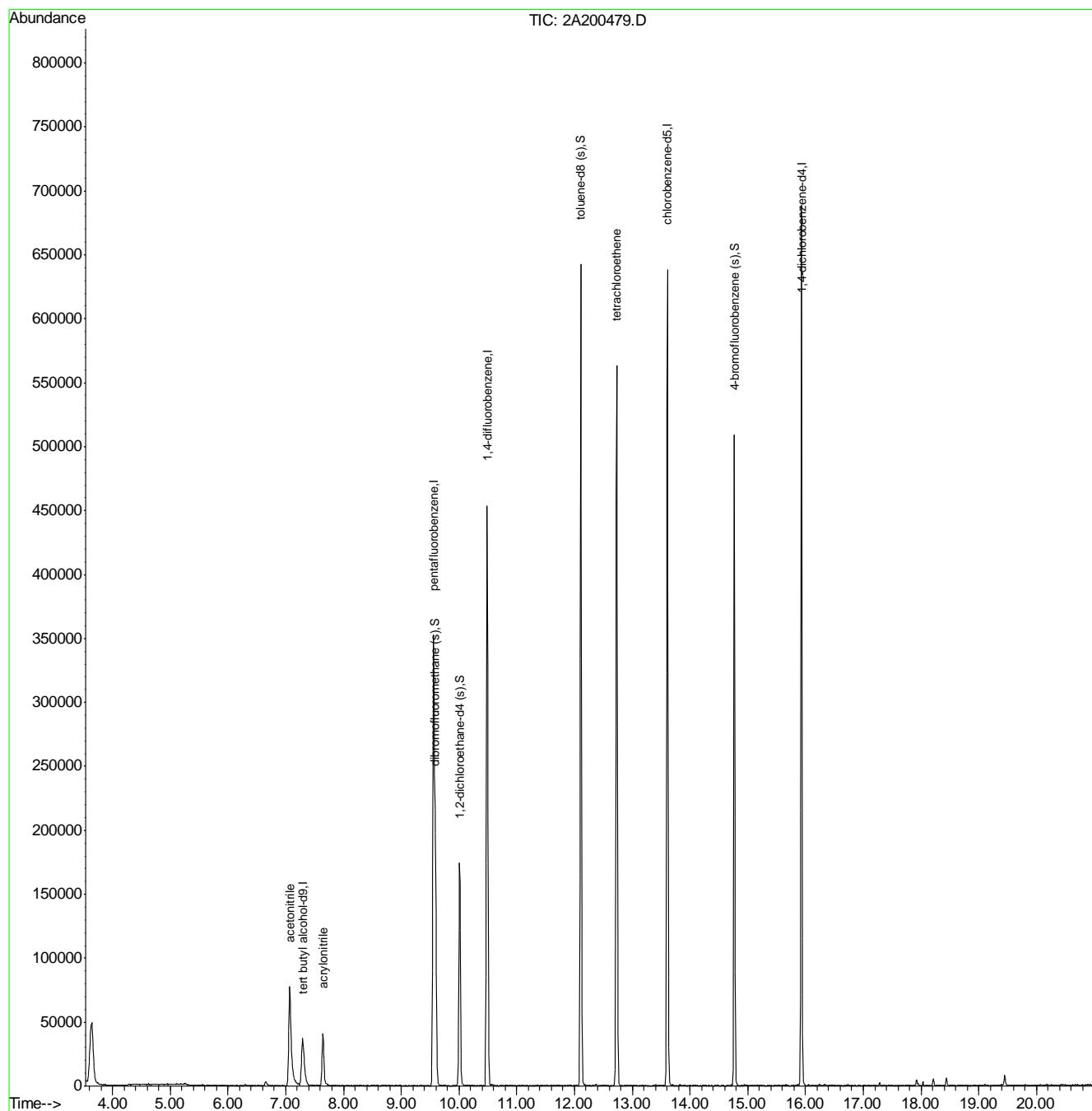
Quant Time: Feb 06 10:51:32 2020

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200803.d
 Acq On : 19 Feb 2020 7:12 am
 Operator : edwardd
 Sample : cc8671-20 Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 07:35:36 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	7.301	65	91637	500.00	ug/L	0.00
5) pentafluorobenzene	9.560	168	317966	50.00	ug/L	0.00
52) 1,4-difluorobenzene	10.491	114	480069	50.00	ug/L	0.00
74) chlorobenzene-d5	13.609	117	418862	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.931	152	222633	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
45) dibromofluoromethane (s)	9.597	113	147796	51.14	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 102.28%		
53) 1,2-dichloroethane-d4 (s)	10.010	65	159886	50.19	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 100.38%		
75) toluene-d8 (s)	12.113	98	526338	49.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.00%		
99) 4-bromofluorobenzene (s)	14.764	95	207576	49.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.90%		
<hr/>						
Target Compounds						
2) ethanol	6.025	45	60072	2178.04	ug/L	96
3) tertiary butyl alcohol	7.421	59	24397	92.39	ug/L	89
4) 1,4-dioxane	11.140	88	13261	528.18	ug/L	94
6) chlorodifluoromethane	4.053	51	103435	23.18	ug/L	97
7) dichlorodifluoromethane	4.021	85	97752	20.42	ug/L	98
8) chloromethane	4.393	50	111059	19.23	ug/L	98
9) vinyl chloride	4.623	62	112478	20.44	ug/L	97
10) 1,3-butadiene	4.665	54	78128	24.32	ug/L	99
11) bromomethane	5.235	94	69308	19.13	ug/L	98
12) chloroethane	5.408	64	56099	19.87	ug/L	95
13) vinyl bromide	5.737	106	60979	21.05	ug/L	100
14) trichlorofluoromethane	5.857	101	118266	20.62	ug/L	98
15) ethyl ether	6.234	74	38216	19.92	ug/L	95
16) 2-chloropropane	6.454	63	32529	21.32	ug/L	91
17) acrolein	6.474	56	10622	20.88	ug/L	94
18) freon 113	6.658	151	60973	22.76	ug/L	98
19) 1,1-dichloroethene	6.658	96	68519	22.10	ug/L	95
20) acetone	6.663	43	55162	73.96	ug/L	100
21) acetonitrile	7.071	41	72401	190.44	ug/L	96
22) iodomethane	6.903	142	100508	20.86	ug/L	97
23) carbon disulfide	7.039	76	194704	20.70	ug/L	99
24) methylene chloride	7.358	84	77631	20.77	ug/L	97
25) methyl acetate	7.113	43	41764	18.31	ug/L	99
26) methyl tert butyl ether	7.709	73	184828	20.33	ug/L	98
27) trans-1,2-dichloroethene	7.740	96	74010	20.85	ug/L	98
28) hexane	8.091	57	123061	23.82	ug/L	98
29) di-isopropyl ether	8.305	45	266165	20.90	ug/L	97
30) ethyl tert-butyl ether	8.760	59	235674	20.33	ug/L	97
31) 2-butanone	8.964	72	22514	74.08	ug/L	# 87
32) 1,1-dichloroethane	8.316	63	139053	20.55	ug/L	99
33) chloroprene	8.415	53	113057	20.98	ug/L	98
34) acrylonitrile	7.651	53	20804	19.03	ug/L	95
35) vinyl acetate	8.258	86	12508	19.18	ug/L	# 90
36) ethyl acetate	8.980	45	8060	17.90	ug/L	90
37) 2,2-dichloropropane	9.058	77	111196	20.94	ug/L	96
38) cis-1,2-dichloroethene	9.027	96	82870	20.49	ug/L	98
39) propionitrile	9.037	54	64607	188.59	ug/L	88
40) bromochloromethane	9.320	130	50026	20.07	ug/L	95
41) tetrahydrofuran	9.335	42	14636	17.97	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200803.d
 Acq On : 19 Feb 2020 7:12 am
 Operator : edwardd
 Sample : cc8671-20 Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 07:35:36 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) chloroform	9.403	83	134344	20.55	ug/L	97
43) tert-butyl formate	9.440	59	59482	20.47	ug/L	96
44) isobutyl alcohol	9.801	43	17917	164.04	ug/L	# 71
46) methacrylonitrile	9.236	67	22660	18.65	ug/L	99
47) 1,1,1-trichloroethane	9.660	97	119056	20.93	ug/L	97
48) cyclohexane	9.770	84	106795	20.61	ug/L	91
49) 1,1-dichloropropene	9.827	75	102621	20.51	ug/L	99
50) tert-amyl alcohol	9.958	73	11630	86.82	ug/L	91
51) carbon tetrachloride	9.853	117	106787	20.62	ug/L	99
54) 2,2,4-trimethylpentane	10.172	57	315052	23.12	ug/L	99
55) tert-amyl methyl ether	10.157	73	214756	19.69	ug/L	98
56) n-butyl alcohol	10.549	56	68966	933.51	ug/L	98
57) benzene	10.078	78	294191	20.25	ug/L	99
58) heptane	10.329	57	66975	23.09	ug/L	97
59) isopropyl acetate	9.989	87	12058	18.18	ug/L	# 88
60) 1,2-dichloroethane	10.104	62	97470	19.22	ug/L	98
61) trichloroethene	10.800	95	76392	20.24	ug/L	98
62) ethyl acrylate	10.789	55	73319	18.52	ug/L	98
63) 2-nitropropane	11.558	41	12822	17.90	ug/L	98
64) 2-chloroethyl vinyl ether	11.590	63	185776	111.79	ug/L	99
65) methyl methacrylate	11.056	100	14474	18.40	ug/L	96
66) 1,2-dichloropropane	11.088	63	80423	20.47	ug/L	97
67) methylcyclohexane	11.093	83	135194	22.54	ug/L	96
68) dibromomethane	11.197	93	42898	19.52	ug/L	97
69) bromodichloromethane	11.349	83	102854	20.23	ug/L	97
70) epichlorohydrin	11.673	57	26620	92.69	ug/L	94
71) cis-1,3-dichloropropene	11.804	75	126831	20.77	ug/L	99
72) 4-methyl-2-pentanone	11.914	58	82645	72.02	ug/L	98
73) 3-methyl-1-butanol	11.914	70	25195	372.14	ug/L	99
76) toluene	12.186	92	177293	19.81	ug/L	100
77) trans-1,3-dichloropropene	12.369	75	109101	20.36	ug/L	99
78) ethyl methacrylate	12.364	69	77331	19.02	ug/L	97
79) 1,1,2-trichloroethane	12.589	83	50731	19.38	ug/L	98
80) 2-hexanone	12.756	58	75654	71.81	ug/L	99
81) tetrachloroethene	12.735	166	79005	19.60	ug/L	99
82) 1,3-dichloropropane	12.766	76	98606	19.25	ug/L	99
83) butyl acetate	12.834	56	38392	17.83	ug/L	92
84) dibromochloromethane	13.012	129	74715	19.57	ug/L	100
85) 1,2-dibromoethane	13.164	107	65726	19.24	ug/L	96
86) n-butyl ether	13.603	57	327868	20.85	ug/L	99
87) chlorobenzene	13.640	112	197301	20.28	ug/L	100
88) 1,1,1,2-tetrachloroethane	13.708	131	74670	20.07	ug/L	97
89) ethylbenzene	13.703	91	329373	20.20	ug/L	100
90) m,p-xylene	13.823	106	254812	40.83	ug/L	97
91) o-xylene	14.220	91	264015	19.91	ug/L	100
92) styrene	14.231	104	211817	21.07	ug/L	97
93) n-amyl acetate	14.268	70	42491	18.69	ug/L	93
94) bromoform	14.456	173	45476	19.51	ug/L	98
95) butyl acrylate	14.058	55	128652	19.40	ug/L	97
96) isopropylbenzene	14.571	105	323503	20.43	ug/L	99
97) cis-1,4-dichloro-2-butene	14.608	88	24234	18.16	ug/L	97
100) bromobenzene	14.947	156	86778	19.60	ug/L	100
101) 1,1,2,2-tetrachloroethane	14.848	83	70193	18.38	ug/L	99
102) trans-1,4-dichloro-2-b...	14.879	53	16931	17.64	ug/L	98
103) 1,2,3-trichloropropane	14.932	110	17359	17.51	ug/L	99
104) n-propylbenzene	14.979	91	379365	19.70	ug/L	97
105) 2-chlorotoluene	15.110	126	82250	19.58	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\
 Data File : 2a200803.d
 Acq On : 19 Feb 2020 7:12 am
 Operator : edwardd
 Sample : cc8671-20 Inst : Instrument #1
 Misc : MS41191,V2A8686,w,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2A8671.M

Quant Results File: M2A8671.RES

Quant Time: Feb 19 07:35:36 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) 4-chlorotoluene	15.225	91	232671	19.74	ug/L	99
107) 1,3,5-trimethylbenzene	15.141	105	270490	20.02	ug/L	99
108) tert-butylbenzene	15.476	119	231083	20.22	ug/L	99
109) 1,2,4-trimethylbenzene	15.528	105	270148	20.00	ug/L	99
110) sec-butylbenzene	15.695	105	345602	19.94	ug/L	99
111) 1,3-dichlorobenzene	15.863	146	160527	20.06	ug/L	97
112) p-isopropyltoluene	15.826	119	292411	20.32	ug/L	99
113) benzyl chloride	16.051	91	137660	19.21	ug/L	99
114) 1,4-dichlorobenzene	15.952	146	157170	19.03	ug/L	99
115) 1,2-dichlorobenzene	16.328	146	150060	19.60	ug/L	99
116) n-butylbenzene	16.234	92	158002	20.56	ug/L	98
117) 1,2-dibromo-3-chloropr...	17.092	157	12629	16.83	ug/L	96
118) 1,3,5-trichlorobenzene	17.280	180	134750	19.88	ug/L	99
119) 1,2,4-trichlorobenzene	17.918	180	110629	19.55	ug/L	99
120) hexachlorobutadiene	18.033	225	61624	19.82	ug/L	98
121) naphthalene	18.211	128	187628	19.28	ug/L	100
122) 1,2,3-trichlorobenzene	18.436	180	96049	19.77	ug/L	98
123) hexachloroethane	16.616	201	51459	19.81	ug/L	97
124) 2-ethylhexyl acrylate	17.950	70	10090	3.28	ug/L	95
125) 2-methylnaphthalene	19.445	142	41893	9.06	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\2020\2_feb\2-20-20\v2a8686\

Data File : 2a200803.d

Acq On : 19 Feb 2020 7:12 am

Operator : edward

Sample : cc8671-20

Misc : MS41191, V2A8686, w, , , 1

Inst : Instrument #1

ALS

Quant Method : C:\MSDCHEM\1\MET

Quant Results File: M2A8671.RES

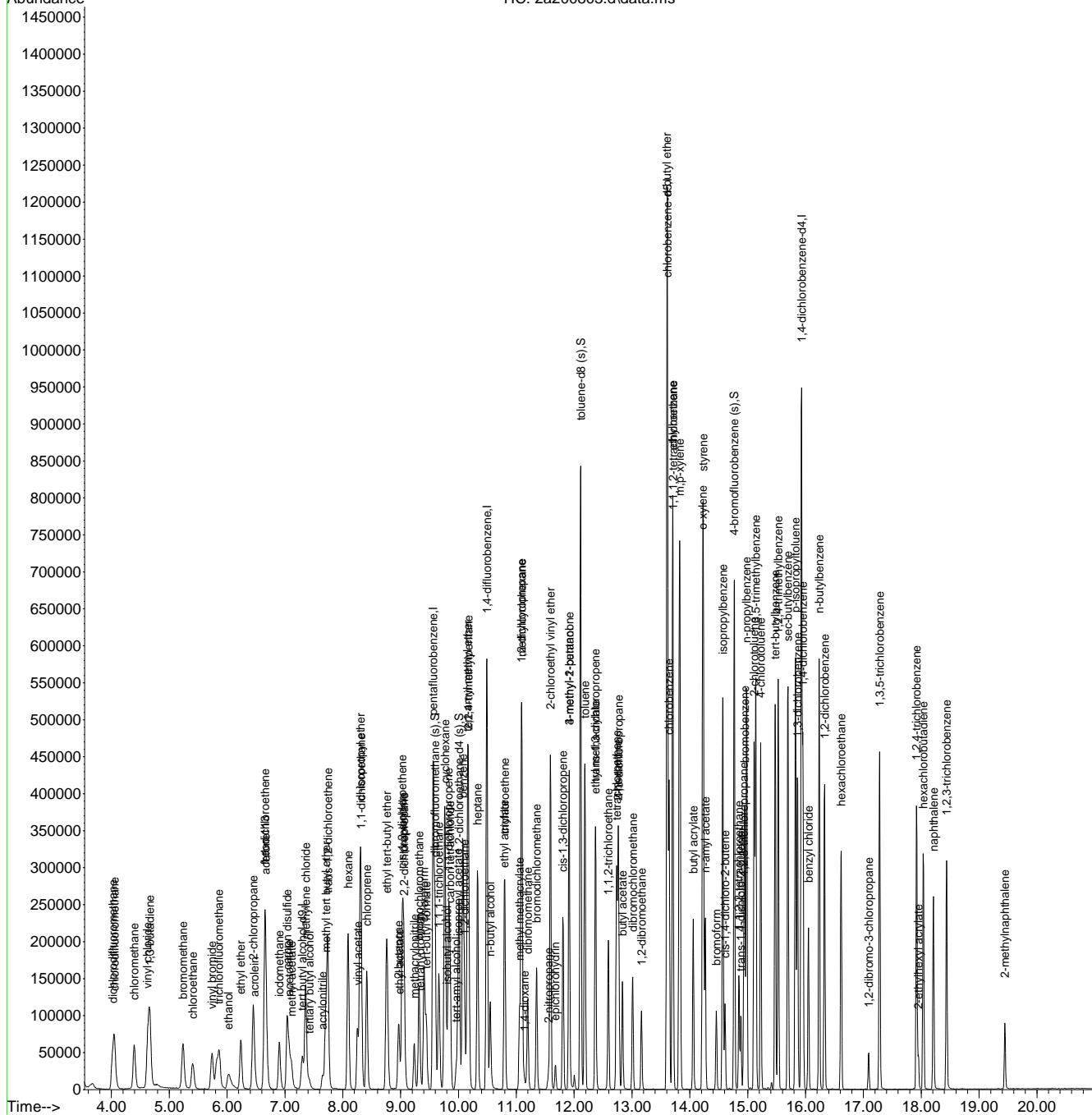
Quant Time: Feb 19 07:35:36 2020

Quant Title : Method SW846 8260C, ZB624 60m x 0.25mm xFri May 03Thu Feb 06 10:48:34 2020

QLast Update : Thu Feb 06 10:48:34 2020

Response via : Initial Calibration

Algebra I



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317673.D
 Acq On : 20 Nov 2019 4:24 pm
 Operator : roberts
 Sample : ic9325-0.2
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 22 11:57:59 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.047	65	129128	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	195473	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	269430	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	222075	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	102718	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	75604	49.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.88%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	77647	50.80	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	101.60%	
74) toluene-d8 (s)	5.977	98	296375	53.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	107.30%	
97) 4-bromofluorobenzene (s)	8.303	95	99589	49.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.12%	
Target Compounds						
				Qvalue		
6) chlorodifluoromethane	1.657	51	408	0.20	ug/L	67
9) vinyl chloride	1.876	62	439	0.19	ug/L	80
18) 1,1-dichloroethene	2.748	96	304	0.22	ug/L	# 68
26) methyl tert butyl ether	3.239	73	1046	0.23	ug/L	55
29) di-isopropyl ether	3.547	45	1136	0.24	ug/L	87
30) ethyl tert-butyl ether	3.795	59	969	0.20	ug/L	70
32) 1,1-dichloroethane	3.557	63	485	0.19	ug/L	# 51
33) chloroprene	3.608	53	361	0.17	ug/L	# 36
37) 2,2-dichloropropane	3.952	77	423	0.20	ug/L	# 48
46) 1,1,1-trichloroethane	4.311	97	400	0.18	ug/L	# 33
48) 1,1-dichloropropene	4.411	75	434	0.23	ug/L	91
49) carbon tetrachloride	4.427	117	374	0.20	ug/L	# 12
54) tert-amyl methyl ether	4.616	73	1013	0.23	ug/L	# 51
61) ethyl acrylate	5.049	55	547	0.22	ug/L	74
68) bromodichloromethane	5.412	83	345	0.19	ug/L	71
69) cis-1,3-dichloropropene	5.752	75	505	0.21	ug/L	94
75) toluene	6.038	92	641	0.20	ug/L	# 70
79) 2-hexanone	6.545	58	729	0.93	ug/L	# 57
80) tetrachloroethene	6.464	166	355	0.23	ug/L	# 61
81) 1,3-dichloropropane	6.522	76	506	0.24	ug/L	85
83) dibromochloromethane	6.699	129	326	0.23	ug/L	# 21
85) n-butyl ether	7.299	57	1158	0.21	ug/L	93
86) chlorobenzene	7.260	112	846	0.23	ug/L	# 65
89) m,p-xylene	7.440	106	1156	0.50	ug/L	90
91) butyl acrylate	7.713	55	750	0.23	ug/L	# 58
92) styrene	7.812	104	900	0.23	ug/L	87
94) isopropylbenzene	8.130	105	1408	0.24	ug/L	82
98) bromobenzene	8.447	156	331	0.21	ug/L	# 68
102) n-propylbenzene	8.528	91	1478	0.22	ug/L	94
105) 1,3,5-trimethylbenzene	8.698	105	1118	0.23	ug/L	78
106) tert-butylbenzene	9.009	119	1004	0.23	ug/L	69
107) 1,2,4-trimethylbenzene	9.057	105	1110	0.23	ug/L	81

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317673.D
 Acq On : 20 Nov 2019 4:24 pm
 Operator : roberts
 Sample : ic9325-0.2
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 22 11:57:59 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) sec-butylbenzene	9.218	105	1205	0.20	ug/L	84
109) 1,3-dichlorobenzene	9.349	146	634	0.23	ug/L	82
110) p-isopropyltoluene	9.359	119	996	0.20	ug/L	63
111) 1,4-dichlorobenzene	9.436	146	587	0.22	ug/L	# 59
112) 1,2-dichlorobenzene	9.792	146	523	0.20	ug/L	82
113) n-butylbenzene	9.760	92	435	0.18	ug/L	# 63
118) naphthalene	11.640	128	1065	0.20	ug/L	68
121) benzyl chloride	9.551	91	693	0.19	ug/L	60

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317673.D
 Acq On : 20 Nov 2019 4:24 pm
 Operator : roberts
 Sample : ic9325-0.2
 Misc : MS39191, VL9325, 5, , , 1
 ALS Vial : 4 Sample Multiplier: 1

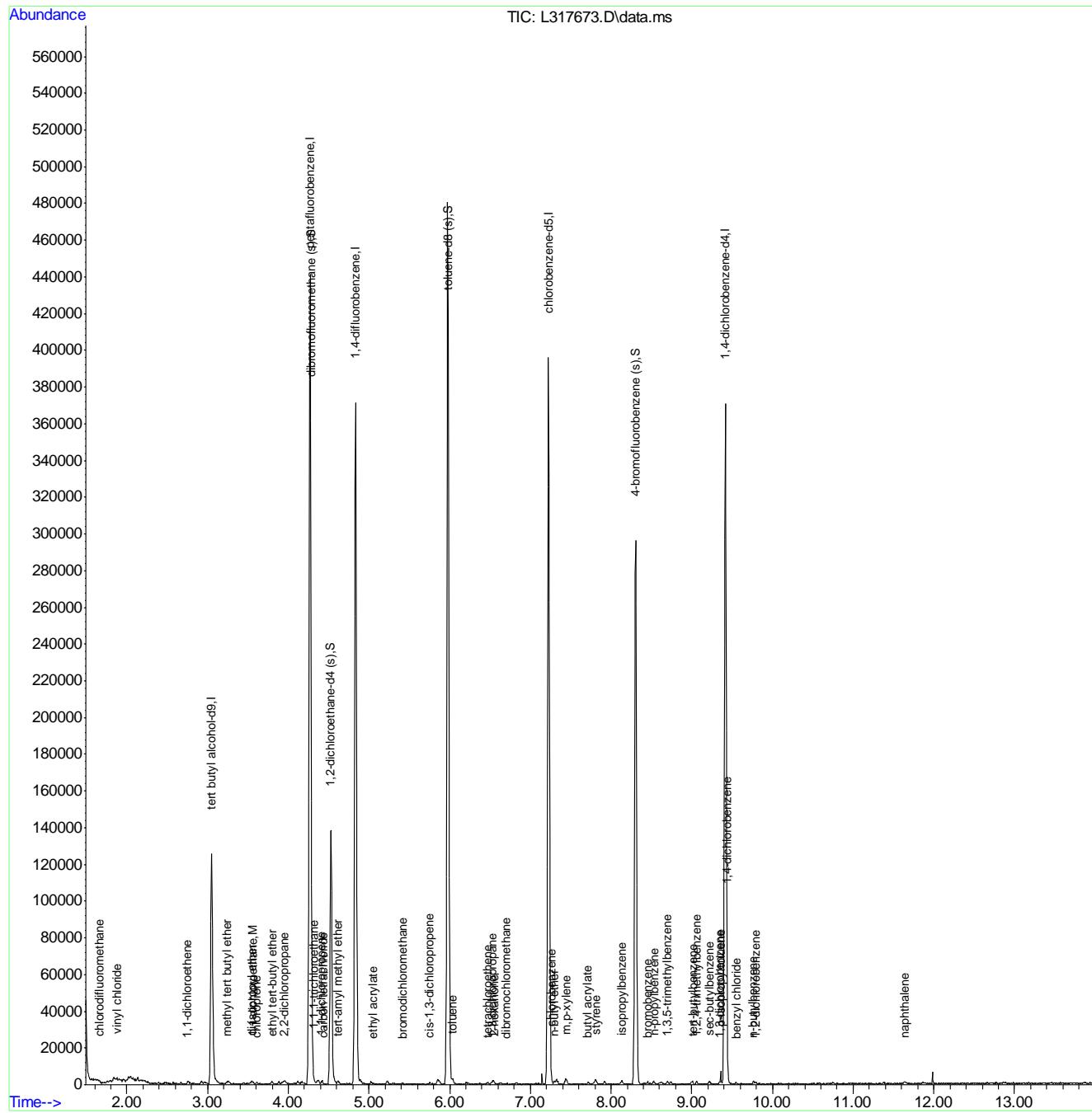
Quant Time: Nov 22 11:57:59 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Manual Integrations
APPROVED
(compounds with "m" flag)

Kanya Veerawat
11/23/19 18:54

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317674.D
Acq On : 20 Nov 2019 4:51 pm
Operator : roberts
Sample : ic9325-0.5
Misc : MS39191,VL9325,5,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 22 12:01:02 2019
Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
QLast Update : Thu Nov 21 11:30:15 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	139309	500.00	ug/L	0.00
5) pentafluorobenzene	4.270	168	202242	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.838	114	277221	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	228841	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	108418	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.279	113	79777	50.42	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	100.84%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	82218	52.28	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery	=	104.56%	
74) toluene-d8 (s)	5.980	98	304444	53.48	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	106.96%	
97) 4-bromofluorobenzene (s)	8.303	95	102599	48.37	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	96.74%	
<hr/>						
Target Compounds						
				Qvalue		
3) ethanol	2.479	45	1594	49.59	ug/L	71
4) tertiary butyl alcohol	3.108	59	789	2.48	ug/L	79
6) chlorodifluoromethane	1.651	51	824	0.40	ug/L	70
8) chloromethane	1.789	50	1217	0.58	ug/L	82
9) vinyl chloride	1.882	62	1146	0.48	ug/L	69
11) chloroethane	2.213	64	488	0.45	ug/L	92
12) vinyl bromide	2.351	106	669	0.51	ug/L	# 60
14) ethyl ether	2.575	74	449	0.45	ug/L	# 72
15) 2-chloropropane	2.662	43	1460	0.56	ug/L	90
18) 1,1-dichloroethene	2.758	96	756	0.53	ug/L	# 71
24) methylene chloride	3.082	84	738	0.51	ug/L	# 70
26) methyl tert butyl ether	3.249	73	2230	0.47	ug/L	94
27) trans-1,2-dichloroethene	3.262	96	799	0.52	ug/L	# 70
29) di-isopropyl ether	3.551	45	2602	0.53	ug/L	71
30) ethyl tert-butyl ether	3.801	59	2247	0.46	ug/L	90
31) 2-butanone	3.917	72	467	1.58	ug/L	# 42
32) 1,1-dichloroethane	3.567	63	1313	0.49	ug/L	95
33) chloroprene	3.615	53	1052	0.47	ug/L	86
37) 2,2-dichloropropane	3.952	77	1116	0.52	ug/L	90
38) cis-1,2-dichloroethene	3.949	96	854	0.53	ug/L	# 69
39) propionitrile	3.971	54	1751	5.36	ug/L	69
41) bromochloromethane	4.109	128	412	0.51	ug/L	# 76
43) chloroform	4.167	83	1462	0.58	ug/L	74
45) methacrylonitrile	4.077	67	425	0.49	ug/L	91
46) 1,1,1-trichloroethane	4.305	97	1163	0.52	ug/L	# 12
48) 1,1-dichloropropene	4.417	75	1005	0.52	ug/L	80
49) carbon tetrachloride	4.417	117	845	0.45	ug/L	# 66
54) tert-amyl methyl ether	4.619	73	2002	0.45	ug/L	87
56) n-butyl alcohol	4.895	56	1853	22.93	ug/L	95
57) benzene	4.562	78	2837	0.52	ug/L	81
60) trichloroethene	5.033	95	716m	0.50	ug/L	
61) ethyl acrylate	5.043	55	1261	0.49	ug/L	74

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317674.D
 Acq On : 20 Nov 2019 4:51 pm
 Operator : roberts
 Sample : ic9325-0.5
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 22 12:01:02 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) 1,2-dichloropropane	5.229	63	754	0.53	ug/L	98
67) dibromomethane	5.303	93	448	0.51	ug/L #	63
68) bromodichloromethane	5.412	83	888	0.47	ug/L	89
69) cis-1,3-dichloropropene	5.749	75	1151	0.46	ug/L	74
71) 4-methyl-2-pentanone	5.852	58	1649	1.93	ug/L #	85
72) 3-methyl-1-butanol	5.874	70	710	9.17	ug/L #	24
75) toluene	6.044	92	1854	0.55	ug/L #	66
76) trans-1,3-dichloropropene	6.205	75	1129	0.53	ug/L	77
77) ethyl methacrylate	6.221	69	998	0.46	ug/L	79
78) 1,1,2-trichloroethane	6.378	83	498	0.45	ug/L #	78
79) 2-hexanone	6.535	58	1617	2.00	ug/L	87
80) tetrachloroethene	6.468	166	937	0.58	ug/L #	68
81) 1,3-dichloropropane	6.525	76	1170	0.55	ug/L	86
82) butyl acetate	6.622	56	615	0.49	ug/L #	69
83) dibromochloromethane	6.708	129	711	0.48	ug/L	75
84) 1,2-dibromoethane	6.827	107	757	0.46	ug/L	91
85) n-butyl ether	7.299	57	2575	0.46	ug/L	89
86) chlorobenzene	7.257	112	1702	0.45	ug/L	88
87) 1,1,1,2-tetrachloroethane	7.318	131	656	0.50	ug/L	72
88) ethylbenzene	7.331	91	3298	0.55	ug/L	97
89) m,p-xylene	7.446	106	2598	1.09	ug/L	92
90) o-xylene	7.803	106	1260	0.53	ug/L #	55
91) butyl acrylate	7.719	55	1614	0.49	ug/L	89
92) styrene	7.812	104	1957	0.49	ug/L	95
93) bromoform	7.992	173	529	0.49	ug/L	82
94) isopropylbenzene	8.139	105	3182	0.52	ug/L	85
98) bromobenzene	8.457	156	711	0.42	ug/L #	74
99) 1,1,2,2-tetrachloroethane	8.419	83	853	0.41	ug/L	95
102) n-propylbenzene	8.528	91	3324	0.46	ug/L	79
103) 2-chlorotoluene	8.627	126	728	0.46	ug/L	85
104) 4-chlorotoluene	8.743	126	653	0.43	ug/L #	48
105) 1,3,5-trimethylbenzene	8.698	105	2300	0.45	ug/L	98
106) tert-butylbenzene	9.003	119	2293	0.50	ug/L	76
107) 1,2,4-trimethylbenzene	9.057	105	2571	0.50	ug/L	85
108) sec-butylbenzene	9.224	105	2578	0.40	ug/L	86
109) 1,3-dichlorobenzene	9.349	146	1234	0.42	ug/L #	70
110) p-isopropyltoluene	9.362	119	2563	0.48	ug/L	87
111) 1,4-dichlorobenzene	9.442	146	1365	0.48	ug/L	83
112) 1,2-dichlorobenzene	9.792	146	1326	0.47	ug/L	88
113) n-butylbenzene	9.760	92	940	0.36	ug/L	94
115) 1,3,5-trichlorobenzene	10.748	180	1030	0.45	ug/L	82
118) naphthalene	11.644	128	2358	0.43	ug/L	83
121) benzyl chloride	9.551	91	1752	0.45	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317674.D
Acq On : 20 Nov 2019 4:51 pm
Operator : roberts
Sample : ic9325-0.5
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

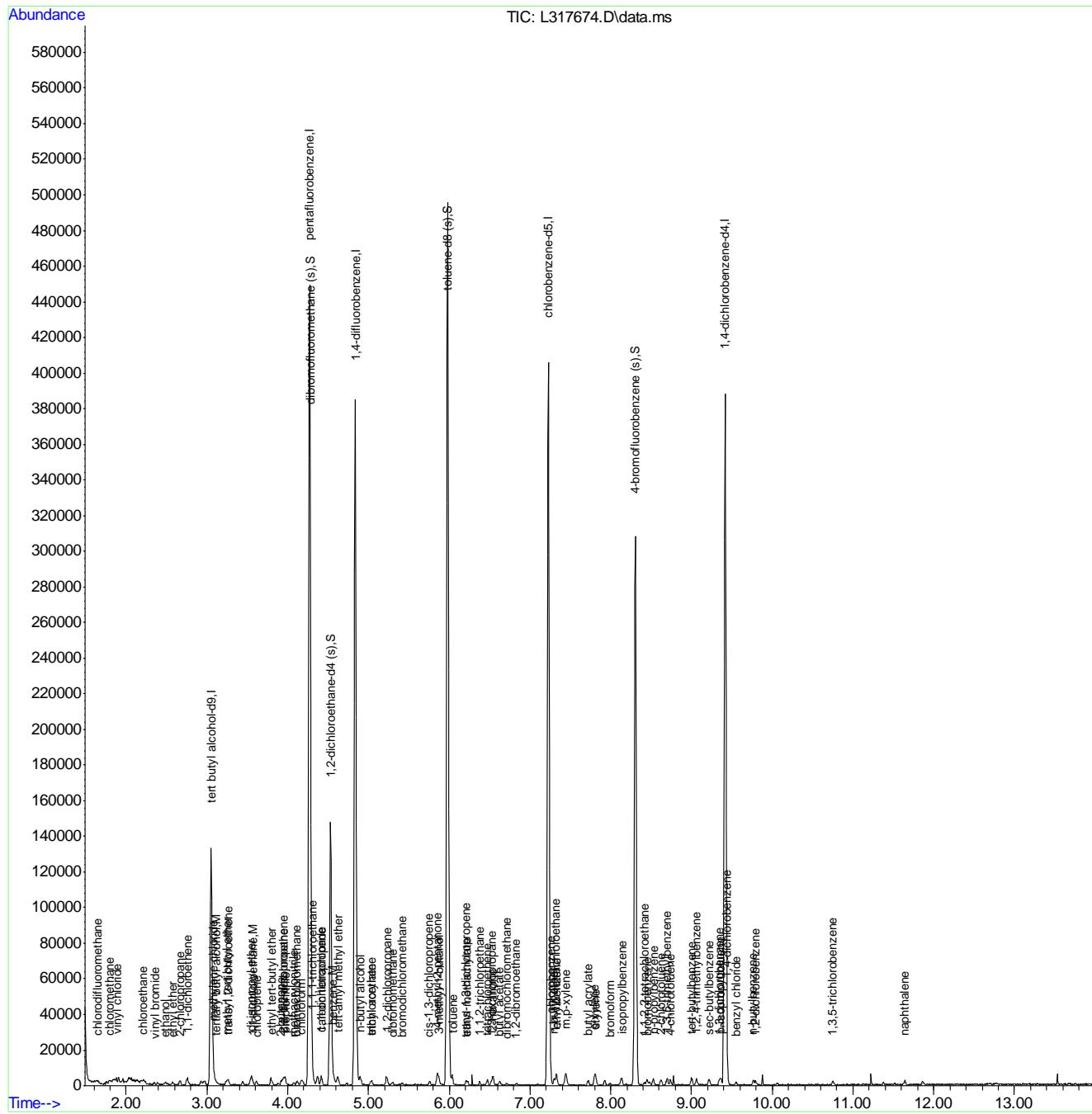
Quant Time: Nov 22 12:01:02 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Manual Integration Approval Summary

Page 1 of 1

Sample Number: VL9325-IC9325
Lab FileID: L317674.D
Injection Time: 11/20/19 16:51

Method: SW846 8260C
Analyst approved: 11/22/19 12:12 Bridget Kelly
Supervisor approved: 11/23/19 18:54 Kanya Veerawat

Parameter	CAS	Sig#	R.T. (min.)	Reason
Trichloroethene	79-01-6		5.03	Split peak

7.6.15.1

7

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317674.D
 Acq On : 20 Nov 2019 4:51 pm
 Operator : roberts
 Sample : ic9325-0.5
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

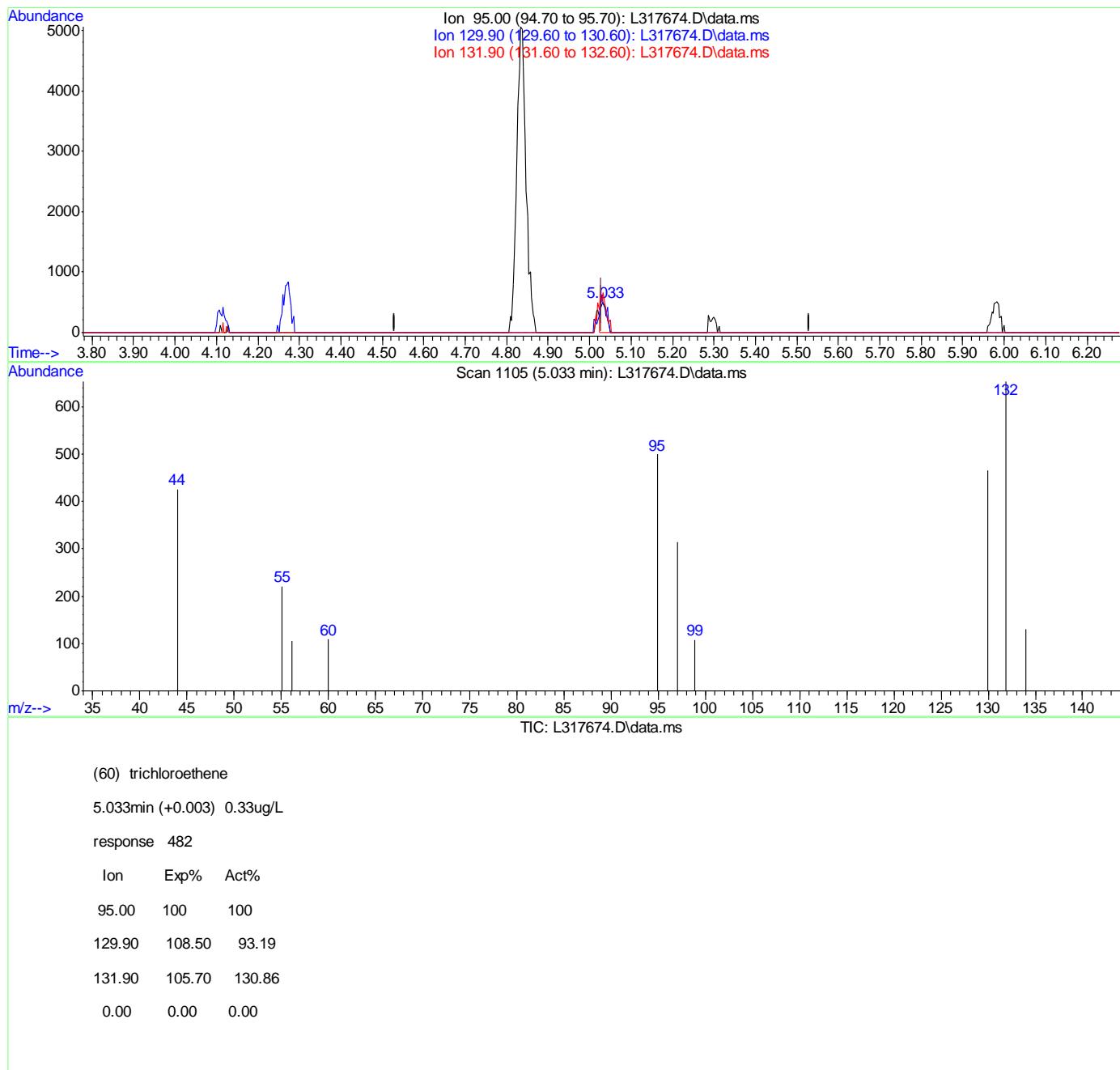
Quant Time: Nov 21 11:30:40 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317674.D
 Acq On : 20 Nov 2019 4:51 pm
 Operator : roberts
 Sample : ic9325-0.5
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

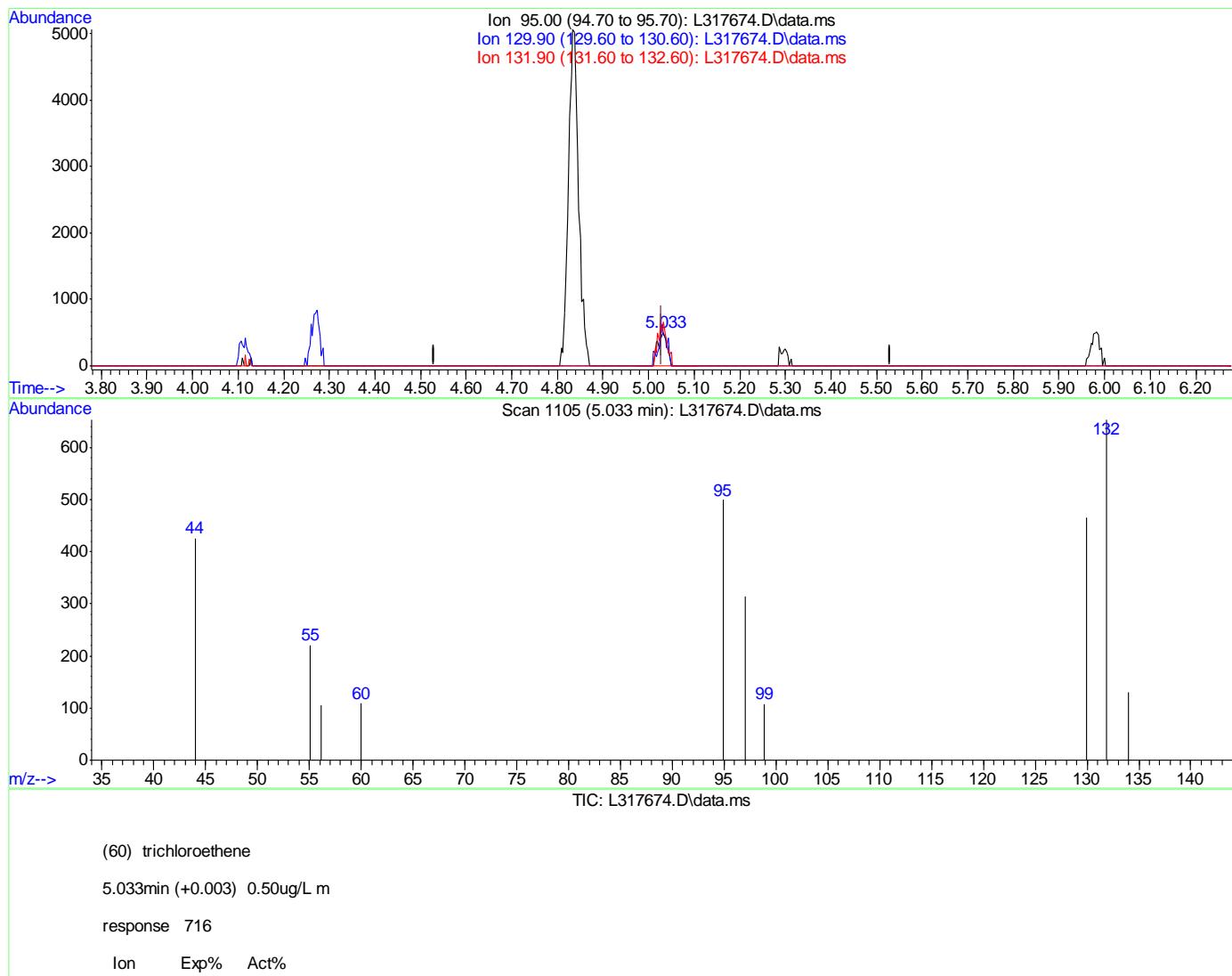
Quant Time: Nov 21 11:30:40 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317675.D
 Acq On : 20 Nov 2019 5:18 pm
 Operator : roberts
 Sample : ic9325-1
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 22 12:04:38 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	137280	500.00	ug/L	0.00
5) pentafluorobenzene	4.269	168	198374	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	273934	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	223711	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	106292	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	77133	49.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.40%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	79569	51.20	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	102.40%	
74) toluene-d8 (s)	5.980	98	298152	53.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	107.14%	
97) 4-bromofluorobenzene (s)	8.306	95	101402	48.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.52%	
Target Compounds						
				Qvalue		
3) ethanol	2.479	45	3132	98.88	ug/L	94
4) tertiary butyl alcohol	3.098	59	1658	5.29	ug/L	85
6) chlorodifluoromethane	1.654	51	1715	0.84	ug/L	89
8) chloromethane	1.799	50	1957	0.96	ug/L	96
9) vinyl chloride	1.879	62	2176	0.93	ug/L	78
11) chloroethane	2.209	64	1065	1.00	ug/L	92
12) vinyl bromide	2.347	106	1052	0.82	ug/L	# 76
13) trichlorofluoromethane	2.389	101	1805	0.74	ug/L	93
14) ethyl ether	2.569	74	806	0.83	ug/L	# 74
15) 2-chloropropane	2.665	43	2459	0.96	ug/L	89
18) 1,1-dichloroethene	2.755	96	1430	1.03	ug/L	# 74
19) acetone	2.761	58	800	3.79	ug/L	99
22) iso-butyl alcohol	4.423	43	1138	10.11	ug/L	86
23) carbon disulfide	2.925	76	4172	1.17	ug/L	95
24) methylene chloride	3.082	84	1311	0.91	ug/L	86
26) methyl tert butyl ether	3.246	73	4280	0.91	ug/L	86
27) trans-1,2-dichloroethene	3.265	96	1498	1.00	ug/L	83
28) hexane	3.442	57	1652	0.77	ug/L	87
29) di-isopropyl ether	3.551	45	4960	1.03	ug/L	91
30) ethyl tert-butyl ether	3.798	59	4821	1.00	ug/L	93
31) 2-butanone	3.916	72	1012	3.50	ug/L	# 80
32) 1,1-dichloroethane	3.563	63	2576	0.98	ug/L	80
33) chloroprene	3.612	53	2125	0.97	ug/L	88
34) acrylonitrile	3.233	53	745	0.90	ug/L	# 66
37) 2,2-dichloropropane	3.955	77	2354	1.11	ug/L	94
38) cis-1,2-dichloroethene	3.949	96	1618	1.02	ug/L	89
39) propionitrile	3.965	54	3332	10.39	ug/L	80
41) bromochloromethane	4.112	128	820	1.04	ug/L	86
43) chloroform	4.164	83	2642	1.06	ug/L	91
45) methacrylonitrile	4.080	67	852	1.00	ug/L	# 61
46) 1,1,1-trichloroethane	4.305	97	2261	1.02	ug/L	# 70
48) 1,1-dichloropropene	4.417	75	2034	1.07	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317675.D
 Acq On : 20 Nov 2019 5:18 pm
 Operator : roberts
 Sample : ic9325-1
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 22 12:04:38 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) carbon tetrachloride	4.423	117	1807	0.97	ug/L	# 78
51) tert amyl alcohol	4.510	55	478	4.66	ug/L	# 38
54) tert-amyl methyl ether	4.619	73	4422	1.00	ug/L	92
55) 2,2,4-trimethylpentane	4.616	57	3172	0.80	ug/L	90
56) n-butyl alcohol	4.898	56	3546	44.41	ug/L	84
57) benzene	4.558	78	5761	1.06	ug/L	95
58) heptane	4.738	57	738	0.81	ug/L	# 79
59) 1,2-dichloroethane	4.584	62	1933	1.09	ug/L	74
60) trichloroethylene	5.027	95	1539	1.08	ug/L	# 66
61) ethyl acrylate	5.043	55	2276	0.90	ug/L	79
65) 1,2-dichloropropane	5.229	63	1245	0.89	ug/L	94
66) methylcyclohexane	5.226	83	1849	0.77	ug/L	82
67) dibromomethane	5.293	93	873	1.00	ug/L	80
68) bromodichloromethane	5.412	83	1739	0.93	ug/L	86
69) cis-1,3-dichloropropene	5.752	75	2362	0.96	ug/L	89
71) 4-methyl-2-pentanone	5.858	58	3496	4.14	ug/L	96
72) 3-methyl-1-butanol	5.880	70	1293	16.89	ug/L	# 48
75) toluene	6.038	92	3703	1.13	ug/L	# 76
76) trans-1,3-dichloropropene	6.204	75	2173	1.05	ug/L	89
77) ethyl methacrylate	6.224	69	2293	1.09	ug/L	70
78) 1,1,2-trichloroethane	6.378	83	1149	1.06	ug/L	# 74
79) 2-hexanone	6.541	58	3153	4.00	ug/L	82
80) tetrachloroethylene	6.471	166	1813	1.15	ug/L	90
81) 1,3-dichloropropane	6.525	76	2235	1.07	ug/L	90
82) butyl acetate	6.622	56	1292	1.05	ug/L	# 49
83) dibromochloromethane	6.715	129	1387	0.97	ug/L	84
84) 1,2-dibromoethane	6.833	107	1780	1.09	ug/L	# 70
85) n-butyl ether	7.299	57	5733	1.04	ug/L	92
86) chlorobenzene	7.254	112	3856	1.05	ug/L	86
87) 1,1,1,2-tetrachloroethane	7.328	131	1258	0.98	ug/L	96
88) ethylbenzene	7.328	91	6568	1.11	ug/L	93
89) m,p-xylene	7.446	106	5006	2.14	ug/L	95
90) o-xylene	7.796	106	2401	1.03	ug/L	93
91) butyl acrylate	7.722	55	3138	0.97	ug/L	80
92) styrene	7.815	104	3798	0.98	ug/L	82
93) bromoform	7.995	173	1063	1.01	ug/L	84
94) isopropylbenzene	8.136	105	6101	1.01	ug/L	93
95) cis-1,4-dichloro-2-butene	8.188	88	516	0.80	ug/L	# 87
98) bromobenzene	8.451	156	1640	0.99	ug/L	# 68
99) 1,1,2,2-tetrachloroethane	8.422	83	1668	0.81	ug/L	91
101) 1,2,3-trichloropropane	8.480	110	534	0.85	ug/L	86
102) n-propylbenzene	8.528	91	6987	0.99	ug/L	98
103) 2-chlorotoluene	8.627	126	1443	0.94	ug/L	85
104) 4-chlorotoluene	8.746	126	1419	0.96	ug/L	89
105) 1,3,5-trimethylbenzene	8.698	105	4970	0.99	ug/L	89
106) tert-butylbenzene	9.003	119	4398	0.98	ug/L	92
107) 1,2,4-trimethylbenzene	9.064	105	4868	0.97	ug/L	88
108) sec-butylbenzene	9.224	105	5970	0.95	ug/L	94
109) 1,3-dichlorobenzene	9.346	146	2723	0.94	ug/L	90
110) p-isopropyltoluene	9.362	119	5241	1.01	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317675.D
 Acq On : 20 Nov 2019 5:18 pm
 Operator : roberts
 Sample : ic9325-1
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 22 12:04:38 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
111) 1,4-dichlorobenzene	9.439	146	2852	1.02	ug/L	97
112) 1,2-dichlorobenzene	9.798	146	2554	0.93	ug/L	85
113) n-butylbenzene	9.763	92	2221	0.88	ug/L	94
115) 1,3,5-trichlorobenzene	10.745	180	1757	0.79	ug/L	83
116) 1,2,4-trichlorobenzene	11.377	180	1574	0.80	ug/L	89
117) hexachlorobutadiene	11.512	225	697	0.86	ug/L #	56
118) naphthalene	11.644	128	4216	0.78	ug/L	89
119) 1,2,3-trichlorobenzene	11.862	180	1466	0.86	ug/L	74
120) hexachloroethane	10.058	119	743	0.79	ug/L #	63
121) benzyl chloride	9.555	91	3421	0.91	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.16

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317675.D
Acq On : 20 Nov 2019 5:18 pm
Operator : roberts
Sample : ic9325-1
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

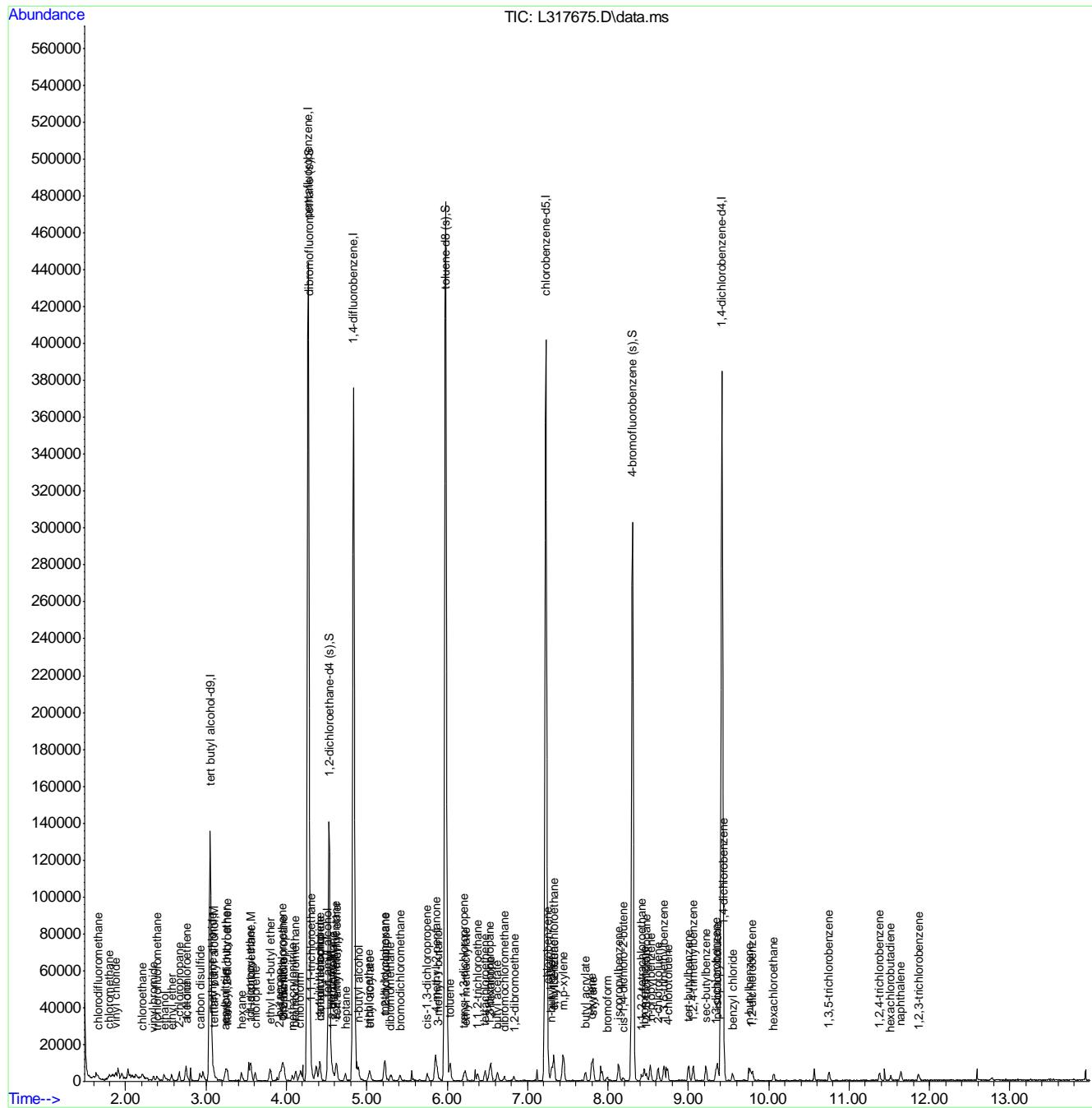
Quant Time: Nov 22 12:04:38 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317676.D
 Acq On : 20 Nov 2019 5:45 pm
 Operator : roberts
 Sample : ic9325-2
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 22 12:05:08 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	129154	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	195163	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	268785	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	220006	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	104598	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	77002	50.43	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.86%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	77271	50.67	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	101.34%	
74) toluene-d8 (s)	5.976	98	294959	53.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	107.78%	
97) 4-bromofluorobenzene (s)	8.303	95	101506	49.60	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.20%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.264	88	1271	50.51	ug/L	96
3) ethanol	2.485	45	5818	195.24	ug/L	95
4) tertiary butyl alcohol	3.108	59	2751	9.33	ug/L	84
6) chlorodifluoromethane	1.651	51	3639	1.82	ug/L	95
7) dichlorodifluoromethane	1.635	85	4132	1.59	ug/L	93
8) chloromethane	1.792	50	3599	1.79	ug/L	84
9) vinyl chloride	1.879	62	4207	1.83	ug/L	85
10) bromomethane	2.123	94	994	2.07	ug/L #	60
11) chloroethane	2.206	64	2045	1.96	ug/L	91
12) vinyl bromide	2.350	106	2299	1.83	ug/L	91
13) trichlorofluoromethane	2.392	101	4315	1.80	ug/L	86
14) ethyl ether	2.569	74	1675	1.75	ug/L	90
15) 2-chloropropane	2.662	43	5079	2.03	ug/L	90
17) freon 113	2.742	151	1924	1.67	ug/L #	82
18) 1,1-dichloroethene	2.748	96	2700	1.98	ug/L #	70
19) acetone	2.761	58	1518	7.31	ug/L	96
20) acetonitrile	2.957	40	3230	20.86	ug/L #	77
22) iso-butyl alcohol	4.410	43	2342	21.14	ug/L	96
23) carbon disulfide	2.925	76	7467	2.14	ug/L	92
24) methylene chloride	3.082	84	2650	1.88	ug/L	97
25) methyl acetate	2.970	74	559	1.45	ug/L #	97
26) methyl tert butyl ether	3.239	73	9226	2.00	ug/L	92
27) trans-1,2-dichloroethene	3.265	96	2992	2.03	ug/L	87
28) hexane	3.445	57	3370	1.61	ug/L	87
29) di-isopropyl ether	3.547	45	9655	2.04	ug/L	94
30) ethyl tert-butyl ether	3.794	59	9232	1.95	ug/L	93
31) 2-butanone	3.916	72	2085	7.33	ug/L	99
32) 1,1-dichloroethane	3.557	63	5208	2.02	ug/L	94
33) chloroprene	3.611	53	4385	2.03	ug/L	85
34) acrylonitrile	3.233	53	1311	1.61	ug/L	84
35) vinyl acetate	3.538	86	728	1.77	ug/L #	24
36) ethyl acetate	3.923	45	642	1.89	ug/L #	30

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317676.D
 Acq On : 20 Nov 2019 5:45 pm
 Operator : roberts
 Sample : ic9325-2
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 22 12:05:08 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

7.617

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	3.955	77	4770	2.29	ug/L	85
38) cis-1,2-dichloroethene	3.945	96	3218	2.06	ug/L	89
39) propionitrile	3.961	54	6348	20.13	ug/L	70
40) methyl acrylate	3.968	85	588	1.87	ug/L #	41
41) bromochloromethane	4.115	128	1551	2.00	ug/L	92
42) tetrahydrofuran	4.118	72	589	1.88	ug/L #	71
43) chloroform	4.160	83	5287	2.16	ug/L	88
45) methacrylonitrile	4.074	67	1556	1.86	ug/L #	69
46) 1,1,1-trichloroethane	4.308	97	4068	1.87	ug/L	90
47) cyclohexane	4.366	84	3896	1.88	ug/L #	76
48) 1,1-dichloropropene	4.410	75	3698	1.98	ug/L	99
49) carbon tetrachloride	4.417	117	3609	1.98	ug/L	93
50) isopropyl acetate	4.529	87	906	1.95	ug/L #	68
51) tert amyl alcohol	4.497	55	986	9.76	ug/L #	49
54) tert-amyl methyl ether	4.616	73	9084	2.10	ug/L	95
55) 2,2,4-trimethylpentane	4.622	57	6408	1.64	ug/L	93
56) n-butyl alcohol	4.889	56	6845	87.36	ug/L	91
57) benzene	4.561	78	10959	2.05	ug/L	92
58) heptane	4.735	57	1489	1.67	ug/L #	77
59) 1,2-dichloroethane	4.584	62	4063	2.34	ug/L	99
60) trichloroethene	5.027	95	2906	2.08	ug/L	85
61) ethyl acrylate	5.046	55	4902	1.98	ug/L	91
62) 2-nitropropane	5.575	41	864	1.80	ug/L	92
64) methyl methacrylate	5.226	100	1019	1.98	ug/L #	43
65) 1,2-dichloropropane	5.226	63	3037	2.21	ug/L	68
66) methylcyclohexane	5.213	83	3916	1.67	ug/L	88
67) dibromomethane	5.287	93	1722	2.01	ug/L #	73
68) bromodichloromethane	5.412	83	3502	1.90	ug/L	94
69) cis-1,3-dichloropropene	5.749	75	4928	2.04	ug/L	94
70) epichlorohydrin	5.662	57	1437	7.07	ug/L	80
71) 4-methyl-2-pentanone	5.848	58	6263	7.57	ug/L	97
72) 3-methyl-1-butanol	5.871	70	2438	32.46	ug/L #	81
75) toluene	6.034	92	7082	2.19	ug/L #	76
76) trans-1,3-dichloropropene	6.207	75	3899	1.92	ug/L	95
77) ethyl methacrylate	6.224	69	4422	2.13	ug/L	90
78) 1,1,2-trichloroethane	6.374	83	2337	2.19	ug/L #	81
79) 2-hexanone	6.538	58	6199	7.99	ug/L	93
80) tetrachloroethene	6.467	166	3264	2.10	ug/L	93
81) 1,3-dichloropropane	6.522	76	4269	2.08	ug/L	91
82) butyl acetate	6.621	56	2481	2.05	ug/L	89
83) dibromochloromethane	6.705	129	3031	2.15	ug/L	72
84) 1,2-dibromoethane	6.820	107	2964	1.85	ug/L	99
85) n-butyl ether	7.295	57	11358	2.10	ug/L	89
86) chlorobenzene	7.250	112	7283	2.01	ug/L	90
87) 1,1,1,2-tetrachloroethane	7.327	131	2521	1.99	ug/L	91
88) ethylbenzene	7.324	91	12559	2.16	ug/L	97
89) m,p-xylene	7.446	106	9947	4.33	ug/L	82
90) o-xylene	7.799	106	4637	2.03	ug/L #	79
91) butyl acrylate	7.712	55	6251	1.96	ug/L	91
92) styrene	7.818	104	7898	2.07	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317676.D
 Acq On : 20 Nov 2019 5:45 pm
 Operator : roberts
 Sample : ic9325-2
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Nov 22 12:05:08 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) bromoform	7.995	173	1900	1.84	ug/L	79
94) isopropylbenzene	8.133	105	11742	1.98	ug/L	96
95) cis-1,4-dichloro-2-butene	8.184	88	982	1.55	ug/L	94
98) bromobenzene	8.450	156	2981	1.83	ug/L	91
99) 1,1,2,2-tetrachloroethane	8.422	83	3868	1.91	ug/L	81
101) 1,2,3-trichloropropane	8.476	110	1174	1.90	ug/L	92
102) n-propylbenzene	8.524	91	13825	2.00	ug/L	97
103) 2-chlorotoluene	8.621	126	2813	1.86	ug/L #	81
104) 4-chlorotoluene	8.730	126	2541	1.75	ug/L #	56
105) 1,3,5-trimethylbenzene	8.701	105	9531	1.92	ug/L	98
106) tert-butylbenzene	8.999	119	8626	1.96	ug/L	89
107) 1,2,4-trimethylbenzene	9.057	105	9759	1.97	ug/L	91
108) sec-butylbenzene	9.217	105	11587	1.87	ug/L	98
109) 1,3-dichlorobenzene	9.349	146	5524	1.94	ug/L	83
110) p-isopropyltoluene	9.362	119	10179	1.99	ug/L	94
111) 1,4-dichlorobenzene	9.439	146	5329	1.93	ug/L	88
112) 1,2-dichlorobenzene	9.795	146	5306	1.96	ug/L	96
113) n-butylbenzene	9.763	92	4363	1.75	ug/L	92
114) 1,2-dibromo-3-chloropr...	10.562	157	952	1.59	ug/L #	65
115) 1,3,5-trichlorobenzene	10.748	180	3504	1.60	ug/L	93
116) 1,2,4-trichlorobenzene	11.380	180	2966	1.54	ug/L	97
117) hexachlorobutadiene	11.515	225	1214	1.53	ug/L #	64
118) naphthalene	11.640	128	8428	1.58	ug/L	94
119) 1,2,3-trichlorobenzene	11.868	180	2503	1.50	ug/L	78
120) hexachloroethane	10.065	119	1558	1.68	ug/L #	71
121) benzyl chloride	9.551	91	6108	1.64	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317676.D
 Acq On : 20 Nov 2019 5:45 pm
 Operator : roberts
 Sample : ic9325-2
 Misc : MS39191, VL9325, 5, , , 1
 ALS Vial : 7 Sample Multiplier: 1

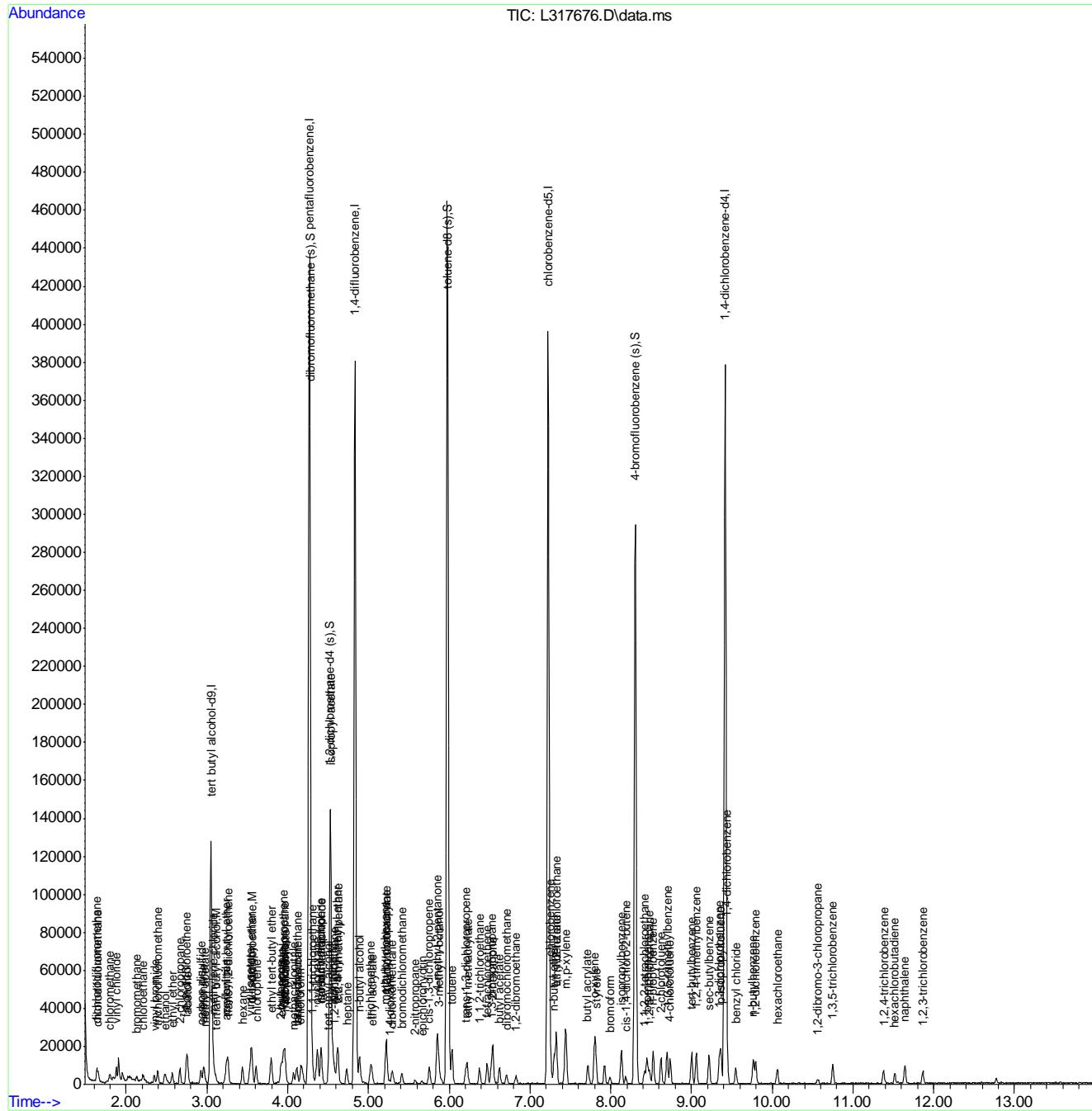
Quant Time: Nov 22 12:05:08 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317677.D
 Acq On : 20 Nov 2019 6:12 pm
 Operator : roberts
 Sample : ic9325-4
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 21 11:30:46 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	131229	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	192366	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	266667	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	220104	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.420	152	103256	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	74519	49.52	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.04%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	76577	50.62	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	101.24%	
74) toluene-d8 (s)	5.977	98	293134	53.54	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	107.08%	
97) 4-bromofluorobenzene (s)	8.303	95	97895	48.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.92%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.261	88	2735	106.98	ug/L	95
3) ethanol	2.472	45	11987	395.89	ug/L	91
4) tertiary butyl alcohol	3.105	59	6018	20.10	ug/L	94
6) chlorodifluoromethane	1.654	51	6479	3.29	ug/L	96
7) dichlorodifluoromethane	1.635	85	9034	3.52	ug/L	88
8) chloromethane	1.795	50	7143	3.60	ug/L	99
9) vinyl chloride	1.879	62	8245	3.63	ug/L	99
10) bromomethane	2.132	94	2048	4.33	ug/L	95
11) chloroethane	2.213	64	4144	4.03	ug/L	96
12) vinyl bromide	2.344	106	4494	3.63	ug/L	84
13) trichlorofluoromethane	2.389	101	9188	3.88	ug/L	91
14) ethyl ether	2.572	74	3460	3.66	ug/L	88
15) 2-chloropropane	2.662	43	9393	3.80	ug/L	97
16) acrolein	2.671	56	1627	3.95	ug/L	95
17) freon 113	2.742	151	4022	3.55	ug/L	85
18) 1,1-dichloroethene	2.752	96	5024	3.74	ug/L	89
19) acetone	2.758	58	3061	14.96	ug/L	92
20) acetonitrile	2.951	40	6298	41.26	ug/L	91
22) iso-butyl alcohol	4.417	43	4271	39.12	ug/L	86
23) carbon disulfide	2.925	76	13589	3.95	ug/L	95
24) methylene chloride	3.082	84	5302	3.81	ug/L	88
25) methyl acetate	2.970	74	1391	3.66	ug/L #	79
26) methyl tert butyl ether	3.246	73	17998	3.95	ug/L	97
27) trans-1,2-dichloroethene	3.262	96	5541	3.81	ug/L	99
28) hexane	3.438	57	7297	3.53	ug/L	98
29) di-isopropyl ether	3.551	45	18937	4.05	ug/L	96
30) ethyl tert-butyl ether	3.795	59	18206	3.90	ug/L	99
31) 2-butanone	3.917	72	3931	14.02	ug/L	94
32) 1,1-dichloroethane	3.557	63	10401	4.08	ug/L	99
33) chloroprene	3.608	53	8111	3.81	ug/L	98
34) acrylonitrile	3.223	53	3035	3.77	ug/L	79
35) vinyl acetate	3.535	86	1503	3.70	ug/L #	82

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317677.D
 Acq On : 20 Nov 2019 6:12 pm
 Operator : roberts
 Sample : ic9325-4
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 21 11:30:46 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) ethyl acetate	3.926	45	1216	3.63	ug/L	92
37) 2,2-dichloropropane	3.958	77	8284	4.03	ug/L	87
38) cis-1,2-dichloroethene	3.945	96	6214	4.04	ug/L	92
39) propionitrile	3.961	54	12019	38.66	ug/L	95
40) methyl acrylate	3.971	85	1239	4.00	ug/L #	58
41) bromochloromethane	4.106	128	3109	4.08	ug/L #	78
42) tetrahydrofuran	4.125	72	1173	3.80	ug/L #	65
43) chloroform	4.164	83	9573	3.96	ug/L	93
45) methacrylonitrile	4.074	67	3271	3.97	ug/L	89
46) 1,1,1-trichloroethane	4.305	97	8152	3.80	ug/L	95
47) cyclohexane	4.363	84	8547	4.18	ug/L #	80
48) 1,1-dichloropropene	4.407	75	7338	3.98	ug/L	84
49) carbon tetrachloride	4.417	117	6948	3.86	ug/L	91
50) isopropyl acetate	4.533	87	1673	3.66	ug/L #	88
51) tert amyl alcohol	4.497	55	1938	19.46	ug/L #	50
54) tert-amyl methyl ether	4.616	73	17330	4.04	ug/L	98
55) 2,2,4-trimethylpentane	4.619	57	14102	3.64	ug/L	96
56) n-butyl alcohol	4.892	56	13537	174.14	ug/L	96
57) benzene	4.561	78	22080	4.17	ug/L	96
58) heptane	4.732	57	3017	3.41	ug/L	89
59) 1,2-dichloroethane	4.587	62	7681	4.47	ug/L	90
60) trichloroethene	5.027	95	5412	3.90	ug/L	91
61) ethyl acrylate	5.040	55	9188	3.75	ug/L	97
62) 2-nitropropane	5.575	41	1727	3.64	ug/L	84
63) 2-chloroethyl vinyl ether	5.604	63	606	12.03	ug/L #	67
64) methyl methacrylate	5.229	100	1808	3.54	ug/L #	78
65) 1,2-dichloropropane	5.229	63	5478	4.01	ug/L	93
66) methylcyclohexane	5.216	83	7895	3.39	ug/L	86
67) dibromomethane	5.293	93	3415	4.02	ug/L	85
68) bromodichloromethane	5.412	83	6992	3.83	ug/L	92
69) cis-1,3-dichloropropene	5.749	75	8911	3.72	ug/L	91
70) epichlorohydrin	5.659	57	2652	13.14	ug/L	97
71) 4-methyl-2-pentanone	5.848	58	12703	15.47	ug/L #	86
72) 3-methyl-1-butanol	5.868	70	5219	70.05	ug/L	92
75) toluene	6.034	92	13399	4.14	ug/L	96
76) trans-1,3-dichloropropene	6.208	75	7715	3.79	ug/L	97
77) ethyl methacrylate	6.224	69	8211	3.96	ug/L	92
78) 1,1,2-trichloroethane	6.371	83	4369	4.09	ug/L	94
79) 2-hexanone	6.541	58	12962	16.70	ug/L	98
80) tetrachloroethene	6.474	166	5976	3.85	ug/L	97
81) 1,3-dichloropropane	6.522	76	8372	4.09	ug/L	94
82) butyl acetate	6.618	56	4977	4.11	ug/L	96
83) dibromochloromethane	6.708	129	5474	3.88	ug/L	97
84) 1,2-dibromoethane	6.827	107	6583	4.11	ug/L	92
85) n-butyl ether	7.295	57	22458	4.15	ug/L	95
86) chlorobenzene	7.247	112	14226	3.93	ug/L	95
87) 1,1,1,2-tetrachloroethane	7.328	131	4979	3.93	ug/L	87
88) ethylbenzene	7.324	91	24874	4.28	ug/L	97
89) m,p-xylene	7.440	106	19287	8.39	ug/L	95
90) o-xylene	7.796	106	9674	4.24	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317677.D
 Acq On : 20 Nov 2019 6:12 pm
 Operator : roberts
 Sample : ic9325-4
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 21 11:30:46 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
91) butyl acrylate	7.716	55	12551	3.93	ug/L	91
92) styrene	7.812	104	15798	4.15	ug/L	95
93) bromoform	7.992	173	4083	3.95	ug/L	91
94) isopropylbenzene	8.133	105	24282	4.10	ug/L	96
95) cis-1,4-dichloro-2-butene	8.184	88	1989	3.15	ug/L	87
98) bromobenzene	8.447	156	5793	3.60	ug/L	84
99) 1,1,2,2-tetrachloroethane	8.419	83	7235	3.62	ug/L	92
100) trans-1,4-dichloro-2-b...	8.457	53	1492	2.92	ug/L	89
101) 1,2,3-trichloropropane	8.476	110	2135	3.51	ug/L	95
102) n-propylbenzene	8.524	91	26379	3.87	ug/L	99
103) 2-chlorotoluene	8.624	126	5791	3.88	ug/L #	78
104) 4-chlorotoluene	8.739	126	5584	3.89	ug/L #	83
105) 1,3,5-trimethylbenzene	8.698	105	19075	3.90	ug/L	97
106) tert-butylbenzene	8.999	119	16391	3.77	ug/L	94
107) 1,2,4-trimethylbenzene	9.057	105	19180	3.92	ug/L	93
108) sec-butylbenzene	9.221	105	22138	3.61	ug/L	98
109) 1,3-dichlorobenzene	9.346	146	10634	3.78	ug/L	90
110) p-isopropyltoluene	9.362	119	19183	3.81	ug/L	97
111) 1,4-dichlorobenzene	9.439	146	9977	3.66	ug/L	99
112) 1,2-dichlorobenzene	9.795	146	10234	3.83	ug/L	99
113) n-butylbenzene	9.766	92	8626	3.50	ug/L	87
114) 1,2-dibromo-3-chloropr...	10.569	157	1846	3.11	ug/L	86
115) 1,3,5-trichlorobenzene	10.751	180	7724	3.58	ug/L	88
116) 1,2,4-trichlorobenzene	11.377	180	6124	3.21	ug/L	95
117) hexachlorobutadiene	11.518	225	2664	3.40	ug/L #	74
118) naphthalene	11.644	128	17350	3.30	ug/L	97
119) 1,2,3-trichlorobenzene	11.868	180	5413	3.29	ug/L	91
120) hexachloroethane	10.062	119	2985	3.25	ug/L	79
121) benzyl chloride	9.551	91	12663	3.45	ug/L	95
122) 2-ethylhexyl acrylate	11.550	70	631	0.52	ug/L	88
123) 2-methylnaphthalene	12.776	142	3342	1.26	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317677.D
 Acq On : 20 Nov 2019 6:12 pm
 Operator : roberts
 Sample : ic9325-4
 Misc : MS39191, VL9325, 5, , , , 1
 ALS Vial : 8 Sample Multiplier: 1

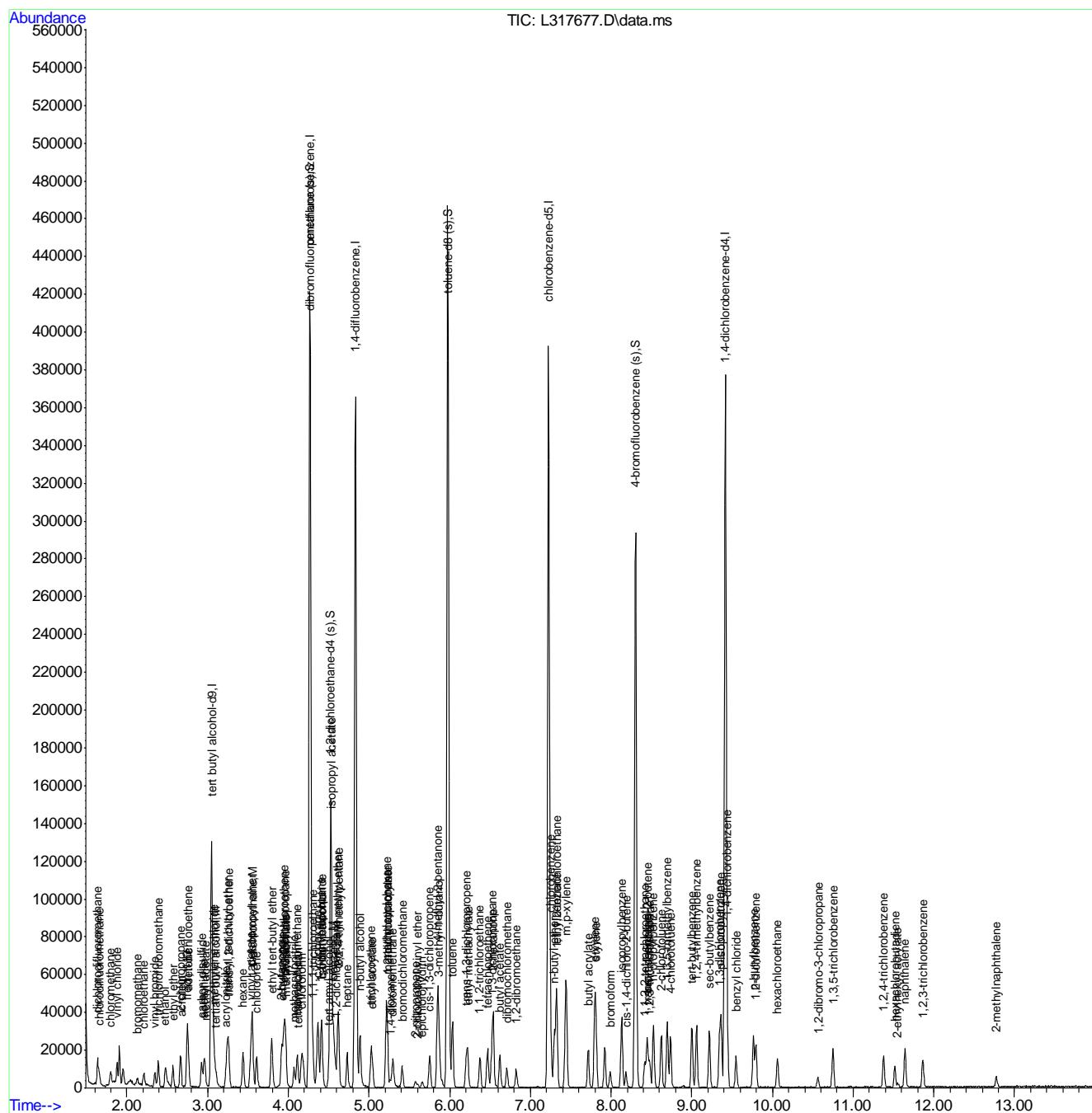
Quant Time: Nov 21 11:30:46 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317678.D
 Acq On : 20 Nov 2019 6:39 pm
 Operator : roberts
 Sample : ic9325-8
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 21 11:30:48 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	122215	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	181129	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	246987	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	207208	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.420	152	97328	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	68798	48.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.10%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	71615	51.11	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	102.22%	
74) toluene-d8 (s)	5.977	98	272651	52.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	105.78%	
97) 4-bromofluorobenzene (s)	8.303	95	92273	48.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.92%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.258	88	5184	217.73	ug/L	85
3) ethanol	2.472	45	22169	786.17	ug/L	93
4) tertiary butyl alcohol	3.105	59	11626	41.69	ug/L	94
6) chlorodifluoromethane	1.654	51	13782	7.43	ug/L	99
7) dichlorodifluoromethane	1.635	85	18151	7.50	ug/L	98
8) chloromethane	1.795	50	13963	7.47	ug/L	95
9) vinyl chloride	1.876	62	15595	7.30	ug/L	99
10) bromomethane	2.126	94	3612	8.11	ug/L #	60
11) chloroethane	2.209	64	7469	7.72	ug/L	97
12) vinyl bromide	2.347	106	8785	7.54	ug/L	81
13) trichlorofluoromethane	2.389	101	17627	7.90	ug/L	100
14) ethyl ether	2.572	74	6805	7.65	ug/L	98
15) 2-chloropropane	2.665	43	18739	8.05	ug/L	97
16) acrolein	2.671	56	2827	7.28	ug/L	91
17) freon 113	2.748	151	7872	7.38	ug/L #	83
18) 1,1-dichloroethene	2.755	96	9983	7.88	ug/L #	79
19) acetone	2.761	58	6097	31.64	ug/L	92
20) acetonitrile	2.957	40	11719	81.54	ug/L	96
21) iodomethane	2.867	142	323	1.16	ug/L #	47
22) iso-butyl alcohol	4.411	43	7657	74.49	ug/L	95
23) carbon disulfide	2.922	76	26136	8.06	ug/L	98
24) methylene chloride	3.076	84	10225	7.81	ug/L	93
25) methyl acetate	2.967	74	2825	7.89	ug/L #	85
26) methyl tert butyl ether	3.246	73	34133	7.97	ug/L	98
27) trans-1,2-dichloroethene	3.265	96	10458	7.64	ug/L	95
28) hexane	3.442	57	14946	7.68	ug/L	89
29) di-isopropyl ether	3.551	45	36367	8.27	ug/L	96
30) ethyl tert-butyl ether	3.798	59	34425	7.83	ug/L	98
31) 2-butanone	3.913	72	8166	30.93	ug/L #	78
32) 1,1-dichloroethane	3.557	63	19641	8.19	ug/L	98
33) chloroprene	3.608	53	15869	7.91	ug/L	96
34) acrylonitrile	3.227	53	5555	7.33	ug/L	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317678.D
 Acq On : 20 Nov 2019 6:39 pm
 Operator : roberts
 Sample : ic9325-8
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 21 11:30:48 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.528	86	2869	7.50	ug/L	# 61
36) ethyl acetate	3.926	45	2559	8.11	ug/L	# 85
37) 2,2-dichloropropane	3.952	77	15307	7.91	ug/L	98
38) cis-1,2-dichloroethene	3.942	96	11532	7.95	ug/L	96
39) propionitrile	3.968	54	23460	80.14	ug/L	94
40) methyl acrylate	3.968	85	2569	8.80	ug/L	# 52
41) bromochloromethane	4.109	128	5915	8.23	ug/L	# 83
42) tetrahydrofuran	4.119	72	2385	8.21	ug/L	93
43) chloroform	4.164	83	18927	8.32	ug/L	96
45) methacrylonitrile	4.070	67	5884	7.57	ug/L	93
46) 1,1,1-trichloroethane	4.302	97	15597	7.72	ug/L	95
47) cyclohexane	4.362	84	15857	8.23	ug/L	94
48) 1,1-dichloropropene	4.411	75	13722	7.90	ug/L	94
49) carbon tetrachloride	4.417	117	12793	7.55	ug/L	91
50) isopropyl acetate	4.523	87	3170	7.37	ug/L	97
51) tert amyl alcohol	4.504	55	3496	37.29	ug/L	# 82
54) tert-amyl methyl ether	4.619	73	33223	8.36	ug/L	96
55) 2,2,4-trimethylpentane	4.622	57	29282	8.16	ug/L	99
56) n-butyl alcohol	4.889	56	27407	380.66	ug/L	98
57) benzene	4.558	78	40602	8.28	ug/L	97
58) heptane	4.728	57	6707	8.17	ug/L	# 85
59) 1,2-dichloroethane	4.584	62	13540	8.50	ug/L	94
60) trichloroethene	5.030	95	10229	7.96	ug/L	91
61) ethyl acrylate	5.043	55	18255	8.04	ug/L	97
62) 2-nitropropane	5.579	41	2944	6.69	ug/L	85
63) 2-chloroethyl vinyl ether	5.601	63	737	15.80	ug/L	75
64) methyl methacrylate	5.222	100	4192	8.86	ug/L	97
65) 1,2-dichloropropane	5.222	63	10696	8.45	ug/L	90
66) methylcyclohexane	5.216	83	16235	7.53	ug/L	97
67) dibromomethane	5.290	93	6394	8.12	ug/L	91
68) bromodichloromethane	5.412	83	13435	7.95	ug/L	95
69) cis-1,3-dichloropropene	5.749	75	17941	8.08	ug/L	98
70) epichlorohydrin	5.662	57	5861	31.36	ug/L	89
71) 4-methyl-2-pentanone	5.848	58	23935	31.47	ug/L	98
72) 3-methyl-1-butanol	5.871	70	10753	155.82	ug/L	# 80
75) toluene	6.038	92	25219	8.29	ug/L	98
76) trans-1,3-dichloropropene	6.201	75	15388	8.03	ug/L	96
77) ethyl methacrylate	6.224	69	16960	8.68	ug/L	93
78) 1,1,2-trichloroethane	6.374	83	8656	8.61	ug/L	88
79) 2-hexanone	6.541	58	24972	34.19	ug/L	94
80) tetrachloroethene	6.468	166	11890	8.14	ug/L	93
81) 1,3-dichloropropane	6.522	76	16829	8.72	ug/L	98
82) butyl acetate	6.625	56	9528	8.36	ug/L	97
83) dibromochloromethane	6.708	129	10638	8.00	ug/L	92
84) 1,2-dibromoethane	6.827	107	12768	8.48	ug/L	98
85) n-butyl ether	7.295	57	41805	8.21	ug/L	96
86) chlorobenzene	7.250	112	27677	8.12	ug/L	98
87) 1,1,1,2-tetrachloroethane	7.321	131	9815	8.24	ug/L	98
88) ethylbenzene	7.328	91	47873	8.76	ug/L	98
89) m,p-xylene	7.443	106	36740	16.98	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317678.D
 Acq On : 20 Nov 2019 6:39 pm
 Operator : roberts
 Sample : ic9325-8
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 21 11:30:48 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.796	106	18683	8.69	ug/L	91
91) butyl acrylate	7.716	55	24486	8.14	ug/L	94
92) styrene	7.812	104	30764	8.58	ug/L	98
93) bromoform	7.989	173	7483	7.69	ug/L	96
94) isopropylbenzene	8.133	105	46562	8.36	ug/L	97
95) cis-1,4-dichloro-2-butene	8.181	88	4076	6.85	ug/L	88
98) bromobenzene	8.447	156	12361	8.15	ug/L	95
99) 1,1,2,2-tetrachloroethane	8.415	83	14474	7.67	ug/L	96
100) trans-1,4-dichloro-2-b...	8.454	53	3055	6.34	ug/L	96
101) 1,2,3-trichloropropane	8.480	110	4424	7.71	ug/L	75
102) n-propylbenzene	8.528	91	51718	8.04	ug/L	95
103) 2-chlorotoluene	8.624	126	11021	7.83	ug/L	98
104) 4-chlorotoluene	8.739	126	10772	7.97	ug/L	99
105) 1,3,5-trimethylbenzene	8.698	105	37615	8.16	ug/L	98
106) tert-butylbenzene	9.003	119	32598	7.95	ug/L	94
107) 1,2,4-trimethylbenzene	9.060	105	36388	7.89	ug/L	94
108) sec-butylbenzene	9.218	105	44647	7.73	ug/L	97
109) 1,3-dichlorobenzene	9.346	146	20352	7.68	ug/L	92
110) p-isopropyltoluene	9.362	119	37385	7.87	ug/L	97
111) 1,4-dichlorobenzene	9.442	146	20451	7.97	ug/L	95
112) 1,2-dichlorobenzene	9.798	146	19257	7.64	ug/L	96
113) n-butylbenzene	9.763	92	16805	7.24	ug/L	90
114) 1,2-dibromo-3-chloropr...	10.565	157	3517	6.29	ug/L	96
115) 1,3,5-trichlorobenzene	10.748	180	14289	7.02	ug/L	97
116) 1,2,4-trichlorobenzene	11.380	180	11903	6.63	ug/L	95
117) hexachlorobutadiene	11.518	225	5183	7.02	ug/L	94
118) naphthalene	11.640	128	33902	6.85	ug/L	95
119) 1,2,3-trichlorobenzene	11.868	180	10399	6.70	ug/L	93
120) hexachloroethane	10.062	119	6063	7.01	ug/L #	70
121) benzyl chloride	9.545	91	25672	7.42	ug/L	96
122) 2-ethylhexyl acrylate	11.560	70	1455	1.27	ug/L #	76
123) 2-methylnaphthalene	12.776	142	6666	2.67	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317678.D
 Acq On : 20 Nov 2019 6:39 pm
 Operator : roberts
 Sample : ic9325-8
 Misc : MS39191, VL9325, 5, , , , 1
 ALS Vial : 9 Sample Multiplier: 1

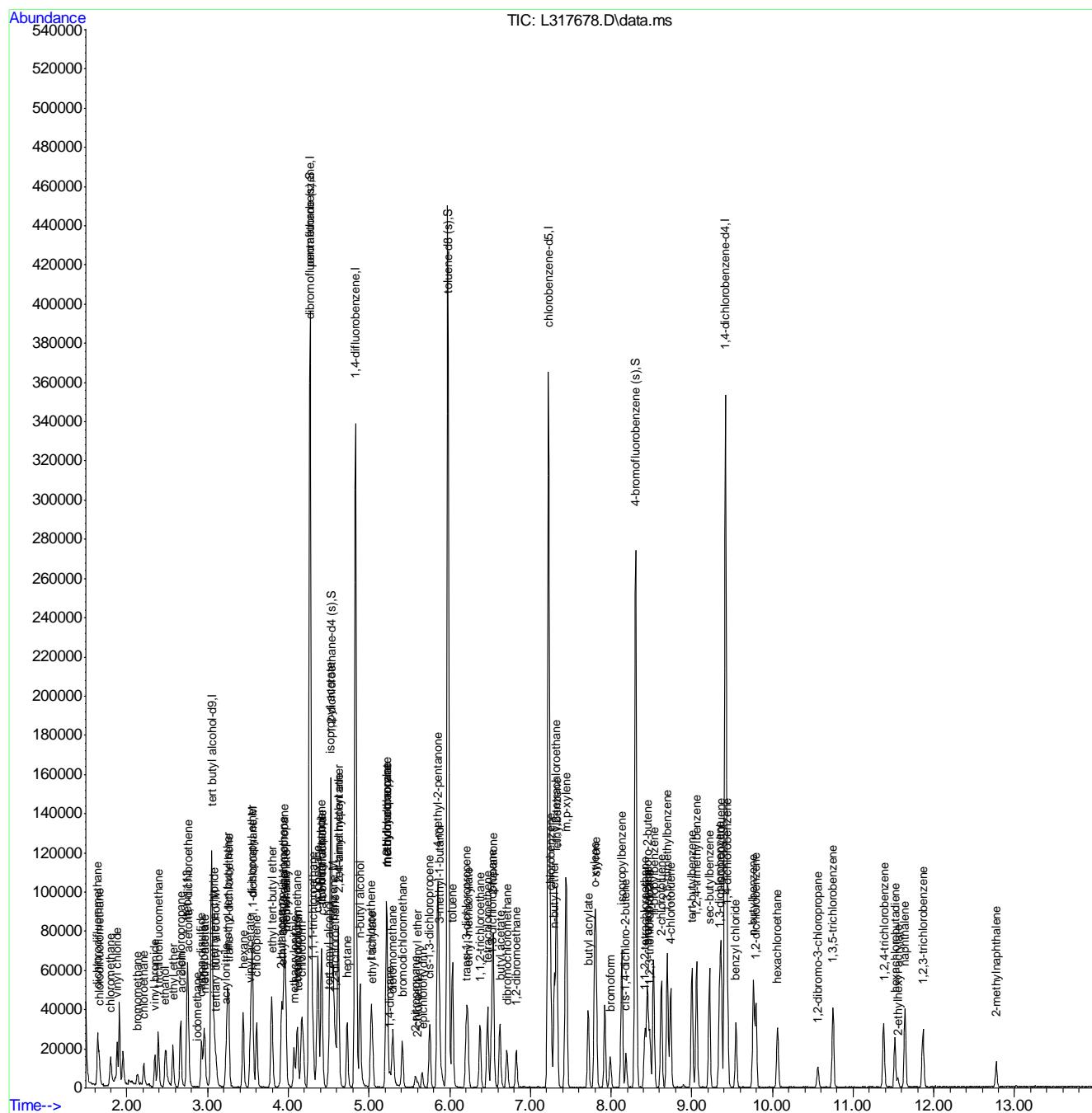
Quant Time: Nov 21 11:30:48 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317679.D
 Acq On : 20 Nov 2019 7:06 pm
 Operator : roberts
 Sample : ic9325-20
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 21 11:30:50 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	114736	500.00	ug/L	0.00
5) pentafluorobenzene	4.273	168	174233	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.837	114	244205	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	206547	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	91392	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.282	113	67544	49.55	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.10%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	71604	51.68	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	103.36%	
74) toluene-d8 (s)	5.983	98	266160	51.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.60%	
97) 4-bromofluorobenzene (s)	8.306	95	89800	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.44%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.267	88	12009	537.26	ug/L	96
3) ethanol	2.479	45	54950	2075.69	ug/L	97
4) tertiary butyl alcohol	3.108	59	25954	99.13	ug/L	98
6) chlorodifluoromethane	1.654	51	34315	19.23	ug/L	98
7) dichlorodifluoromethane	1.635	85	46415	19.95	ug/L	98
8) chloromethane	1.795	50	35762	19.90	ug/L	100
9) vinyl chloride	1.879	62	41435	20.16	ug/L	97
10) bromomethane	2.129	94	8600	20.08	ug/L	95
11) chloroethane	2.213	64	18820	20.22	ug/L	96
12) vinyl bromide	2.347	106	23486	20.96	ug/L	99
13) trichlorofluoromethane	2.389	101	44645	20.81	ug/L	95
14) ethyl ether	2.572	74	17021	19.89	ug/L	99
15) 2-chloropropane	2.665	43	45114	20.15	ug/L	96
16) acrolein	2.675	56	7035	18.84	ug/L	88
17) freon 113	2.748	151	20795	20.26	ug/L	98
18) 1,1-dichloroethene	2.755	96	24462	20.09	ug/L	95
19) acetone	2.765	58	14000	75.53	ug/L	# 78
20) acetonitrile	2.957	40	26255	189.91	ug/L	99
21) iodomethane	2.870	142	1781	6.66	ug/L	73
22) iso-butyl alcohol	4.417	43	19375	195.94	ug/L	97
23) carbon disulfide	2.928	76	62390	20.00	ug/L	98
24) methylene chloride	3.082	84	25689	20.41	ug/L	100
25) methyl acetate	2.970	74	6379	18.51	ug/L	89
26) methyl tert butyl ether	3.249	73	82569	20.03	ug/L	98
27) trans-1,2-dichloroethene	3.265	96	25655	19.49	ug/L	99
28) hexane	3.445	57	37623	20.09	ug/L	98
29) di-isopropyl ether	3.554	45	86962	20.56	ug/L	98
30) ethyl tert-butyl ether	3.798	59	84879	20.08	ug/L	96
31) 2-butanone	3.917	72	18894	74.40	ug/L	# 79
32) 1,1-dichloroethane	3.560	63	47431	20.57	ug/L	98
33) chloroprene	3.612	53	39454	20.45	ug/L	96
34) acrylonitrile	3.227	53	13712	18.80	ug/L	85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317679.D
 Acq On : 20 Nov 2019 7:06 pm
 Operator : roberts
 Sample : ic9325-20
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 21 11:30:50 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.535	86	7049	19.16	ug/L	# 79
36) ethyl acetate	3.929	45	6078	20.02	ug/L	# 76
37) 2,2-dichloropropane	3.961	77	37907	20.37	ug/L	97
38) cis-1,2-dichloroethene	3.949	96	28629	20.53	ug/L	99
39) propionitrile	3.968	54	55030	195.43	ug/L	94
40) methyl acrylate	3.974	85	5520	19.66	ug/L	# 88
41) bromochloromethane	4.112	128	14205	20.56	ug/L	97
42) tetrahydrofuran	4.125	72	5462	19.56	ug/L	93
43) chloroform	4.167	83	44447	20.31	ug/L	98
45) methacrylonitrile	4.074	67	14235	19.05	ug/L	90
46) 1,1,1-trichloroethane	4.311	97	38325	19.73	ug/L	94
47) cyclohexane	4.369	84	39325	21.23	ug/L	97
48) 1,1-dichloropropene	4.417	75	33377	19.97	ug/L	97
49) carbon tetrachloride	4.424	117	32455	19.91	ug/L	99
50) isopropyl acetate	4.536	87	8061	19.48	ug/L	95
51) tert amyl alcohol	4.510	55	8514	94.40	ug/L	92
54) tert-amyl methyl ether	4.622	73	80720	20.54	ug/L	99
55) 2,2,4-trimethylpentane	4.622	57	72046	20.30	ug/L	98
56) n-butyl alcohol	4.892	56	65686	922.71	ug/L	96
57) benzene	4.565	78	99309	20.48	ug/L	98
58) heptane	4.735	57	16537	20.38	ug/L	98
59) 1,2-dichloroethane	4.590	62	31745	20.15	ug/L	98
60) trichloroethene	5.030	95	25263	19.87	ug/L	95
61) ethyl acrylate	5.049	55	43598	19.42	ug/L	97
62) 2-nitropropane	5.582	41	7858	18.07	ug/L	80
63) 2-chloroethyl vinyl ether	5.611	63	2430	52.68	ug/L	96
64) methyl methacrylate	5.229	100	9445	20.19	ug/L	93
65) 1,2-dichloropropane	5.232	63	25870	20.68	ug/L	92
66) methylcyclohexane	5.219	83	42586	19.97	ug/L	98
67) dibromomethane	5.300	93	16252	20.89	ug/L	87
68) bromodichloromethane	5.418	83	34153	20.43	ug/L	99
69) cis-1,3-dichloropropene	5.755	75	44660	20.35	ug/L	97
70) epichlorohydrin	5.662	57	16070	86.97	ug/L	98
71) 4-methyl-2-pentanone	5.855	58	57900	76.99	ug/L	100
72) 3-methyl-1-butanol	5.877	70	24980	366.10	ug/L	89
75) toluene	6.038	92	62652	20.65	ug/L	94
76) trans-1,3-dichloropropene	6.211	75	38387	20.10	ug/L	96
77) ethyl methacrylate	6.230	69	39629	20.34	ug/L	93
78) 1,1,2-trichloroethane	6.378	83	20688	20.66	ug/L	91
79) 2-hexanone	6.541	58	58294	80.06	ug/L	93
80) tetrachloroethene	6.471	166	29152	20.01	ug/L	99
81) 1,3-dichloropropane	6.525	76	39662	20.62	ug/L	99
82) butyl acetate	6.625	56	23118	20.35	ug/L	98
83) dibromochloromethane	6.711	129	26219	19.78	ug/L	97
84) 1,2-dibromoethane	6.827	107	30500	20.31	ug/L	97
85) n-butyl ether	7.299	57	104974	20.68	ug/L	98
86) chlorobenzene	7.254	112	69371	20.43	ug/L	95
87) 1,1,1,2-tetrachloroethane	7.324	131	24392	20.54	ug/L	98
88) ethylbenzene	7.331	91	117313	21.53	ug/L	99
89) m,p-xylene	7.443	106	91556	42.44	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317679.D
 Acq On : 20 Nov 2019 7:06 pm
 Operator : roberts
 Sample : ic9325-20
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 21 11:30:50 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.799	106	45540	21.25	ug/L	99
91) butyl acrylate	7.719	55	60075	20.03	ug/L	99
92) styrene	7.815	104	75072	21.01	ug/L	97
93) bromoform	7.995	173	19116	19.70	ug/L	99
94) isopropylbenzene	8.133	105	114986	20.70	ug/L	96
95) cis-1,4-dichloro-2-butene	8.191	88	10672	17.99	ug/L	96
98) bromobenzene	8.451	156	30037	21.10	ug/L	99
99) 1,1,2,2-tetrachloroethane	8.419	83	34762	19.63	ug/L	96
100) trans-1,4-dichloro-2-b...	8.457	53	8221	18.16	ug/L	97
101) 1,2,3-trichloropropane	8.480	110	10536	19.56	ug/L	99
102) n-propylbenzene	8.528	91	127091	21.05	ug/L	97
103) 2-chlorotoluene	8.624	126	26675	20.19	ug/L	93
104) 4-chlorotoluene	8.740	126	26156	20.60	ug/L	94
105) 1,3,5-trimethylbenzene	8.698	105	89308	20.63	ug/L	95
106) tert-butylbenzene	9.003	119	79526	20.65	ug/L	99
107) 1,2,4-trimethylbenzene	9.064	105	89329	20.62	ug/L	98
108) sec-butylbenzene	9.221	105	110724	20.43	ug/L	96
109) 1,3-dichlorobenzene	9.346	146	51710	20.79	ug/L	97
110) p-isopropyltoluene	9.365	119	92872	20.82	ug/L	99
111) 1,4-dichlorobenzene	9.445	146	48833	20.27	ug/L	94
112) 1,2-dichlorobenzene	9.795	146	48101	20.32	ug/L	98
113) n-butylbenzene	9.766	92	43146	19.79	ug/L	95
114) 1,2-dibromo-3-chloropr...	10.569	157	9025	17.20	ug/L	98
115) 1,3,5-trichlorobenzene	10.752	180	36660	19.19	ug/L	92
116) 1,2,4-trichlorobenzene	11.380	180	32215	19.10	ug/L	93
117) hexachlorobutadiene	11.522	225	12928	18.64	ug/L	97
118) naphthalene	11.644	128	87304	18.79	ug/L	99
119) 1,2,3-trichlorobenzene	11.865	180	28349	19.45	ug/L	91
120) hexachloroethane	10.062	119	15911	19.58	ug/L	95
121) benzyl chloride	9.548	91	62156	19.14	ug/L	99
122) 2-ethylhexyl acrylate	11.554	70	3651	3.39	ug/L	99
123) 2-methylnaphthalene	12.770	142	19058	8.12	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317679.D
Acq On : 20 Nov 2019 7:06 pm
Operator : roberts
Sample : ic9325-20
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

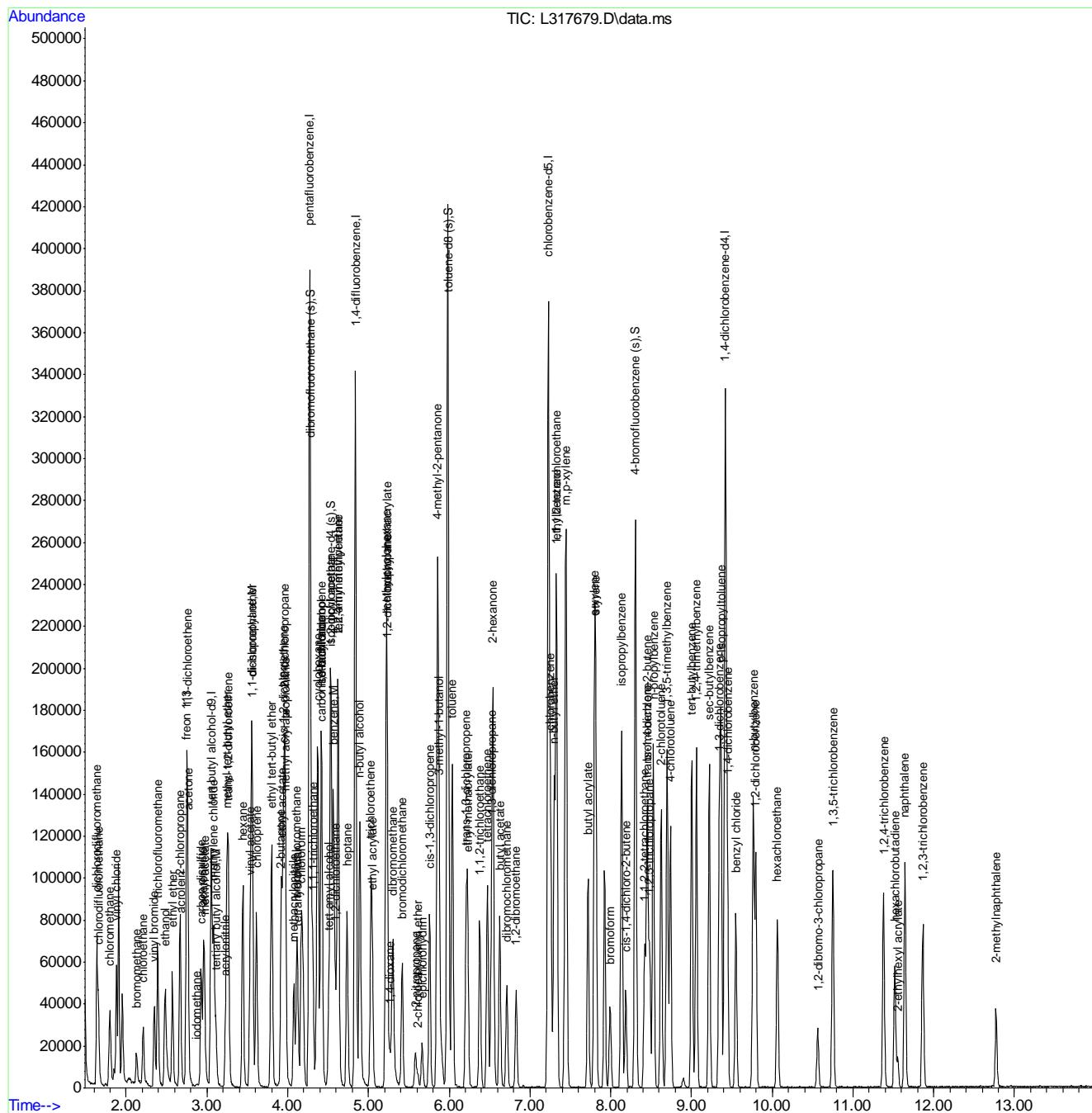
Quant Time: Nov 21 11:30:50 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Please update : Thu Nov 21 11:50:15
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317680.D
 Acq On : 20 Nov 2019 7:33 pm
 Operator : roberts
 Sample : icc9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 21 11:30:52 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	117088	500.00	ug/L	0.00
5) pentafluorobenzene	4.269	168	160719	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.837	114	226009	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	197691	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	87060	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.279	113	62868	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.00%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	64109	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	100.00%	
74) toluene-d8 (s)	5.980	98	245898	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.00%	
97) 4-bromofluorobenzene (s)	8.306	95	85163	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.00%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.267	88	28513	1250.00	ug/L	100
3) ethanol	2.482	45	135079	5000.00	ug/L	100
4) tertiary butyl alcohol	3.108	59	66798	250.00	ug/L	100
6) chlorodifluoromethane	1.657	51	82283	50.00	ug/L	100
7) dichlorodifluoromethane	1.635	85	107304	50.00	ug/L	100
8) chloromethane	1.798	50	82901	50.00	ug/L	100
9) vinyl chloride	1.879	62	94803	50.00	ug/L	100
10) bromomethane	2.123	94	19753	50.00	ug/L	100
11) chloroethane	2.206	64	42930	50.00	ug/L	100
12) vinyl bromide	2.344	106	51674	50.00	ug/L	100
13) trichlorofluoromethane	2.386	101	98961	50.00	ug/L	100
14) ethyl ether	2.572	74	39477	50.00	ug/L	100
15) 2-chloropropane	2.665	43	103244	50.00	ug/L	100
16) acrolein	2.674	56	17220	50.00	ug/L	100
17) freon 113	2.745	151	47341	50.00	ug/L	100
18) 1,1-dichloroethene	2.751	96	56172	50.00	ug/L	100
19) acetone	2.764	58	34197	200.00	ug/L	100
20) acetonitrile	2.957	40	63762	500.00	ug/L	100
21) iodomethane	2.877	142	12334	50.00	ug/L	100
22) iso-butyl alcohol	4.417	43	45606	500.00	ug/L	100
23) carbon disulfide	2.925	76	143875	50.00	ug/L	100
24) methylene chloride	3.082	84	58060	50.00	ug/L	100
25) methyl acetate	2.970	74	15893	50.00	ug/L	100
26) methyl tert butyl ether	3.246	73	190102	50.00	ug/L	100
27) trans-1,2-dichloroethene	3.265	96	60726	50.00	ug/L	100
28) hexane	3.441	57	86390	50.00	ug/L	100
29) di-isopropyl ether	3.551	45	195090	50.00	ug/L	100
30) ethyl tert-butyl ether	3.798	59	194993	50.00	ug/L	100
31) 2-butanone	3.920	72	46851	200.00	ug/L	100
32) 1,1-dichloroethane	3.560	63	106366	50.00	ug/L	100
33) chloroprene	3.611	53	88979	50.00	ug/L	100
34) acrylonitrile	3.226	53	33633	50.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317680.D
 Acq On : 20 Nov 2019 7:33 pm
 Operator : roberts
 Sample : icc9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 21 11:30:52 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.531	86	16964	50.00	ug/L	100
36) ethyl acetate	3.929	45	14005	50.00	ug/L	100
37) 2,2-dichloropropane	3.955	77	85849	50.00	ug/L	100
38) cis-1,2-dichloroethene	3.945	96	64316	50.00	ug/L	100
39) propionitrile	3.968	54	129872	500.00	ug/L	100
40) methyl acrylate	3.971	85	12947	50.00	ug/L	100
41) bromochloromethane	4.109	128	31870	50.00	ug/L	100
42) tetrahydrofuran	4.122	72	12882	50.00	ug/L	100
43) chloroform	4.167	83	100955	50.00	ug/L	100
45) methacrylonitrile	4.074	67	34462	50.00	ug/L	100
46) 1,1,1-trichloroethane	4.308	97	89610	50.00	ug/L	100
47) cyclohexane	4.366	84	85448	50.00	ug/L	100
48) 1,1-dichloropropene	4.414	75	77093	50.00	ug/L	100
49) carbon tetrachloride	4.420	117	75200	50.00	ug/L	100
50) isopropyl acetate	4.532	87	19090	50.00	ug/L	100
51) tert amyl alcohol	4.507	55	20798	250.00	ug/L	100
54) tert-amyl methyl ether	4.622	73	181874	50.00	ug/L	100
55) 2,2,4-trimethylpentane	4.625	57	164247	50.00	ug/L	100
56) n-butyl alcohol	4.892	56	164709	2500.00	ug/L	100
57) benzene	4.561	78	224366	50.00	ug/L	100
58) heptane	4.735	57	37540	50.00	ug/L	100
59) 1,2-dichloroethane	4.584	62	72885	50.00	ug/L	100
60) trichloroethene	5.030	95	58821	50.00	ug/L	100
61) ethyl acrylate	5.046	55	103885	50.00	ug/L	100
62) 2-nitropropane	5.579	41	20126	50.00	ug/L	100
63) 2-chloroethyl vinyl ether	5.611	63	10673	250.00	ug/L	100
64) methyl methacrylate	5.229	100	21649	50.00	ug/L	100
65) 1,2-dichloropropane	5.226	63	57882	50.00	ug/L	100
66) methylcyclohexane	5.216	83	98677	50.00	ug/L	100
67) dibromomethane	5.296	93	36006	50.00	ug/L	100
68) bromodichloromethane	5.418	83	77340	50.00	ug/L	100
69) cis-1,3-dichloropropene	5.755	75	101574	50.00	ug/L	100
70) epichlorohydrin	5.662	57	42753	250.00	ug/L	100
71) 4-methyl-2-pentanone	5.854	58	139209	200.00	ug/L	100
72) 3-methyl-1-butanol	5.871	70	63148	1000.00	ug/L	100
75) toluene	6.037	92	145183	50.00	ug/L	100
76) trans-1,3-dichloropropene	6.207	75	91407	50.00	ug/L	100
77) ethyl methacrylate	6.227	69	93219	50.00	ug/L	100
78) 1,1,2-trichloroethane	6.381	83	47932	50.00	ug/L	100
79) 2-hexanone	6.541	58	139386	200.00	ug/L	100
80) tetrachloroethene	6.471	166	69719	50.00	ug/L	100
81) 1,3-dichloropropane	6.522	76	92034	50.00	ug/L	100
82) butyl acetate	6.625	56	54372	50.00	ug/L	100
83) dibromochloromethane	6.711	129	63439	50.00	ug/L	100
84) 1,2-dibromoethane	6.827	107	71859	50.00	ug/L	100
85) n-butyl ether	7.298	57	242867	50.00	ug/L	100
86) chlorobenzene	7.257	112	162527	50.00	ug/L	100
87) 1,1,1,2-tetrachloroethane	7.324	131	56842	50.00	ug/L	100
88) ethylbenzene	7.327	91	260809	50.00	ug/L	100
89) m,p-xylene	7.443	106	206479	100.00	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317680.D
 Acq On : 20 Nov 2019 7:33 pm
 Operator : roberts
 Sample : icc9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 21 11:30:52 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.799	106	102564	50.00	ug/L	100
91) butyl acrylate	7.719	55	143526	50.00	ug/L	100
92) styrene	7.815	104	171019	50.00	ug/L	100
93) bromoform	7.992	173	46430	50.00	ug/L	100
94) isopropylbenzene	8.133	105	265789	50.00	ug/L	100
95) cis-1,4-dichloro-2-butene	8.187	88	28396	50.00	ug/L	100
98) bromobenzene	8.450	156	67798	50.00	ug/L	100
99) 1,1,2,2-tetrachloroethane	8.422	83	84361	50.00	ug/L	100
100) trans-1,4-dichloro-2-b...	8.460	53	21559	50.00	ug/L	100
101) 1,2,3-trichloropropane	8.483	110	25659	50.00	ug/L	100
102) n-propylbenzene	8.527	91	287592	50.00	ug/L	100
103) 2-chlorotoluene	8.627	126	62933	50.00	ug/L	100
104) 4-chlorotoluene	8.739	126	60470	50.00	ug/L	100
105) 1,3,5-trimethylbenzene	8.698	105	206207	50.00	ug/L	100
106) tert-butylbenzene	9.006	119	183420	50.00	ug/L	100
107) 1,2,4-trimethylbenzene	9.060	105	206339	50.00	ug/L	100
108) sec-butylbenzene	9.217	105	258185	50.00	ug/L	100
109) 1,3-dichlorobenzene	9.346	146	118457	50.00	ug/L	100
110) p-isopropyltoluene	9.365	119	212461	50.00	ug/L	100
111) 1,4-dichlorobenzene	9.442	146	114769	50.00	ug/L	100
112) 1,2-dichlorobenzene	9.795	146	112746	50.00	ug/L	100
113) n-butylbenzene	9.766	92	103867	50.00	ug/L	100
114) 1,2-dibromo-3-chloropr...	10.565	157	24996	50.00	ug/L	100
115) 1,3,5-trichlorobenzene	10.748	180	91003	50.00	ug/L	100
116) 1,2,4-trichlorobenzene	11.380	180	80337	50.00	ug/L	100
117) hexachlorobutadiene	11.521	225	33034	50.00	ug/L	100
118) naphthalene	11.643	128	221362	50.00	ug/L	100
119) 1,2,3-trichlorobenzene	11.865	180	69440	50.00	ug/L	100
120) hexachloroethane	10.065	119	38707	50.00	ug/L	100
121) benzyl chloride	9.548	91	154700	50.00	ug/L	100
122) 2-ethylhexyl acrylate	11.554	70	10248	10.00	ug/L	100
123) 2-methylnaphthalene	12.773	142	55885	25.00	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.21

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317680.D
Acq On : 20 Nov 2019 7:33 pm
Operator : roberts
Sample : icc9325-50
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

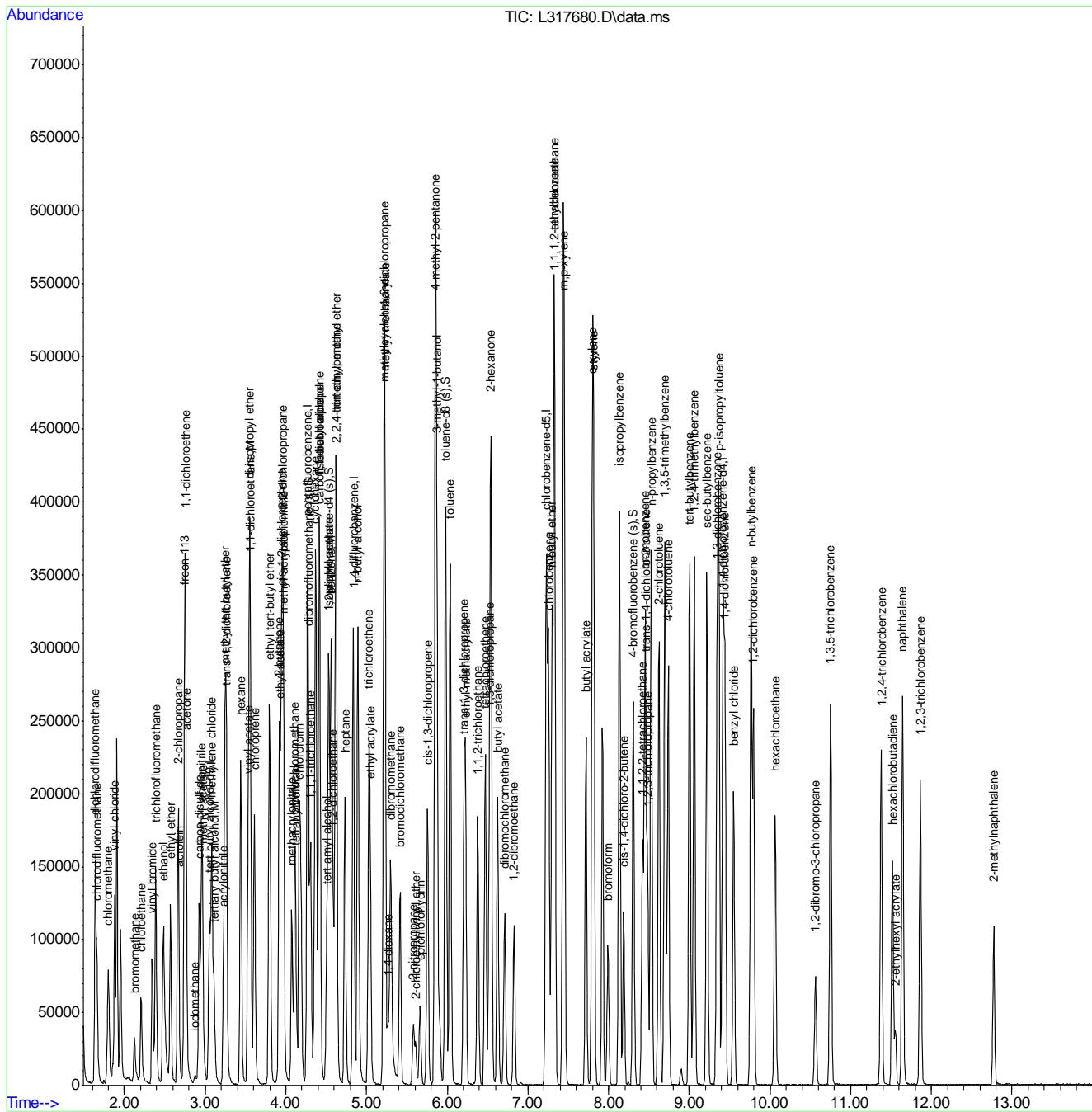
Quant Time: Nov 21 11:30:52 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317681.D
 Acq On : 20 Nov 2019 8:00 pm
 Operator : roberts
 Sample : ic9325-100
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 21 11:30:54 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	111388	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	155318	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	224593	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	197649	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.420	152	85087	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	61813	50.87	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 101.74%		
53) 1,2-dichloroethane-d4 (s)	4.526	65	61981	48.65	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 97.30%		
74) toluene-d8 (s)	5.980	98	244963	49.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.64%		
97) 4-bromofluorobenzene (s)	8.306	95	83702	50.28	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.56%		
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.267	88	51715	2383.18	ug/L	99
3) ethanol	2.482	45	233664	9091.76	ug/L	97
4) tertiary butyl alcohol	3.111	59	118509	466.23	ug/L	98
6) chlorodifluoromethane	1.654	51	157064	98.76	ug/L	99
7) dichlorodifluoromethane	1.635	85	211035	101.75	ug/L	99
8) chloromethane	1.798	50	156785	97.85	ug/L	97
9) vinyl chloride	1.879	62	178037	97.16	ug/L	98
10) bromomethane	2.113	94	43912	115.02	ug/L	98
11) chloroethane	2.200	64	76610	92.33	ug/L	95
12) vinyl bromide	2.341	106	95726	95.85	ug/L	99
13) trichlorofluoromethane	2.382	101	186760	97.64	ug/L	98
14) ethyl ether	2.569	74	72094	94.49	ug/L	97
15) 2-chloropropane	2.662	43	188031	94.23	ug/L	98
16) acrolein	2.671	56	31467	94.54	ug/L	97
17) freon 113	2.742	151	87329	95.44	ug/L	96
18) 1,1-dichloroethene	2.748	96	101849	93.81	ug/L	97
19) acetone	2.761	58	61959	374.97	ug/L	# 84
20) acetonitrile	2.954	40	114133	926.11	ug/L	94
21) iodomethane	2.870	142	44467	186.53	ug/L	93
22) iso-butyl alcohol	4.417	43	82870	940.14	ug/L	98
23) carbon disulfide	2.925	76	262966	94.56	ug/L	99
24) methylene chloride	3.079	84	106565	94.96	ug/L	99
25) methyl acetate	2.966	74	28960	94.28	ug/L	98
26) methyl tert butyl ether	3.246	73	343517	93.49	ug/L	99
27) trans-1,2-dichloroethene	3.262	96	107961	91.98	ug/L	99
28) hexane	3.438	57	166601	99.78	ug/L	96
29) di-isopropyl ether	3.550	45	347856	92.25	ug/L	94
30) ethyl tert-butyl ether	3.798	59	352376	93.50	ug/L	99
31) 2-butanone	3.916	72	85434	377.39	ug/L	98
32) 1,1-dichloroethane	3.557	63	189514	92.18	ug/L	97
33) chloroprene	3.608	53	165265	96.10	ug/L	98
34) acrylonitrile	3.226	53	61399	94.45	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317681.D
 Acq On : 20 Nov 2019 8:00 pm
 Operator : roberts
 Sample : ic9325-100
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 21 11:30:54 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.531	86	30274	92.33	ug/L	# 91
36) ethyl acetate	3.926	45	27211	100.53	ug/L	89
37) 2,2-dichloropropane	3.955	77	152510	91.91	ug/L	96
38) cis-1,2-dichloroethene	3.942	96	117166	94.25	ug/L	99
39) propionitrile	3.968	54	222796	887.58	ug/L	89
40) methyl acrylate	3.968	85	23426	93.61	ug/L	# 90
41) bromochloromethane	4.112	128	56278	91.36	ug/L	93
42) tetrahydrofuran	4.122	72	23333	93.71	ug/L	99
43) chloroform	4.163	83	184086	94.34	ug/L	98
45) methacrylonitrile	4.074	67	62266	93.48	ug/L	95
46) 1,1,1-trichloroethane	4.305	97	167605	96.77	ug/L	100
47) cyclohexane	4.362	84	160229	97.02	ug/L	92
48) 1,1-dichloropropene	4.414	75	140614	94.37	ug/L	98
49) carbon tetrachloride	4.417	117	138190	95.08	ug/L	97
50) isopropyl acetate	4.529	87	34763	94.22	ug/L	99
51) tert amyl alcohol	4.510	55	36779	457.47	ug/L	# 81
54) tert-amyl methyl ether	4.619	73	324607	89.80	ug/L	99
55) 2,2,4-trimethylpentane	4.622	57	305861	93.70	ug/L	98
56) n-butyl alcohol	4.898	56	293243	4478.99	ug/L	97
57) benzene	4.558	78	400848	89.89	ug/L	98
58) heptane	4.731	57	75445	101.12	ug/L	90
59) 1,2-dichloroethane	4.584	62	129925	89.69	ug/L	98
60) trichloroethene	5.027	95	111593	95.46	ug/L	99
61) ethyl acrylate	5.046	55	189864	91.96	ug/L	98
62) 2-nitropropane	5.579	41	38083	95.21	ug/L	92
63) 2-chloroethyl vinyl ether	5.607	63	29469	694.62	ug/L	98
64) methyl methacrylate	5.226	100	40799	94.82	ug/L	96
65) 1,2-dichloropropane	5.226	63	104605	90.93	ug/L	100
66) methylcyclohexane	5.216	83	183804	93.72	ug/L	98
67) dibromomethane	5.296	93	66428	92.83	ug/L	99
68) bromodichloromethane	5.415	83	145520	94.67	ug/L	98
69) cis-1,3-dichloropropene	5.755	75	189872	94.05	ug/L	97
70) epichlorohydrin	5.662	57	80970	476.46	ug/L	96
71) 4-methyl-2-pentanone	5.851	58	245857	355.45	ug/L	96
72) 3-methyl-1-butanol	5.874	70	109685	1747.90	ug/L	93
75) toluene	6.037	92	267447	92.13	ug/L	97
76) trans-1,3-dichloropropene	6.207	75	168482	92.18	ug/L	98
77) ethyl methacrylate	6.227	69	169542	90.96	ug/L	99
78) 1,1,2-trichloroethane	6.378	83	87752	91.56	ug/L	96
79) 2-hexanone	6.541	58	245965	353.00	ug/L	95
80) tetrachloroethene	6.471	166	129796	93.10	ug/L	97
81) 1,3-dichloropropane	6.522	76	167405	90.97	ug/L	99
82) butyl acetate	6.625	56	98503	90.60	ug/L	97
83) dibromochloromethane	6.711	129	118063	93.07	ug/L	99
84) 1,2-dibromoethane	6.827	107	133432	92.86	ug/L	95
85) n-butyl ether	7.298	57	435985	89.78	ug/L	97
86) chlorobenzene	7.254	112	302007	92.93	ug/L	95
87) 1,1,1,2-tetrachloroethane	7.324	131	102271	89.98	ug/L	96
88) ethylbenzene	7.327	91	467414	89.63	ug/L	97
89) m,p-xylene	7.443	106	373630	180.99	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317681.D
 Acq On : 20 Nov 2019 8:00 pm
 Operator : roberts
 Sample : ic9325-100
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 21 11:30:54 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.799	106	190503	92.89	ug/L	98
91) butyl acrylate	7.716	55	259816	90.53	ug/L	98
92) styrene	7.815	104	305936	89.46	ug/L	98
93) bromoform	7.995	173	85929	92.56	ug/L	98
94) isopropylbenzene	8.133	105	484074	91.08	ug/L	99
95) cis-1,4-dichloro-2-butene	8.187	88	55035	96.93	ug/L	95
98) bromobenzene	8.450	156	124821	94.19	ug/L	96
99) 1,1,2,2-tetrachloroethane	8.418	83	151460	91.85	ug/L	97
100) trans-1,4-dichloro-2-b...	8.454	53	39945	94.79	ug/L	87
101) 1,2,3-trichloropropane	8.479	110	45030	89.78	ug/L	97
102) n-propylbenzene	8.527	91	520612	92.61	ug/L	97
103) 2-chlorotoluene	8.627	126	113528	92.29	ug/L	96
104) 4-chlorotoluene	8.739	126	110151	93.19	ug/L	97
105) 1,3,5-trimethylbenzene	8.698	105	371932	92.28	ug/L	97
106) tert-butylbenzene	9.002	119	340938	95.09	ug/L	99
107) 1,2,4-trimethylbenzene	9.060	105	374057	92.74	ug/L	98
108) sec-butylbenzene	9.221	105	472950	93.72	ug/L	98
109) 1,3-dichlorobenzene	9.343	146	220115	95.06	ug/L	100
110) p-isopropyltoluene	9.365	119	384616	92.61	ug/L	99
111) 1,4-dichlorobenzene	9.442	146	210567	93.86	ug/L	98
112) 1,2-dichlorobenzene	9.795	146	202659	91.96	ug/L	97
113) n-butylbenzene	9.763	92	200656	98.83	ug/L	98
114) 1,2-dibromo-3-chloropr...	10.562	157	46703	95.59	ug/L	98
115) 1,3,5-trichlorobenzene	10.748	180	171849	96.61	ug/L	95
116) 1,2,4-trichlorobenzene	11.377	180	155761	99.19	ug/L	97
117) hexachlorobutadiene	11.518	225	64095	99.26	ug/L	96
118) naphthalene	11.643	128	415670	96.07	ug/L	99
119) 1,2,3-trichlorobenzene	11.865	180	135715	99.99	ug/L	98
120) hexachloroethane	10.061	119	74939	99.05	ug/L	94
121) benzyl chloride	9.551	91	283046	93.60	ug/L	98
122) 2-ethylhexyl acrylate	11.554	70	20422	20.39	ug/L	97
123) 2-methylnaphthalene	12.773	142	108338	49.59	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317681.D
Acq On : 20 Nov 2019 8:00 pm
Operator : roberts
Sample : ic9325-100
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

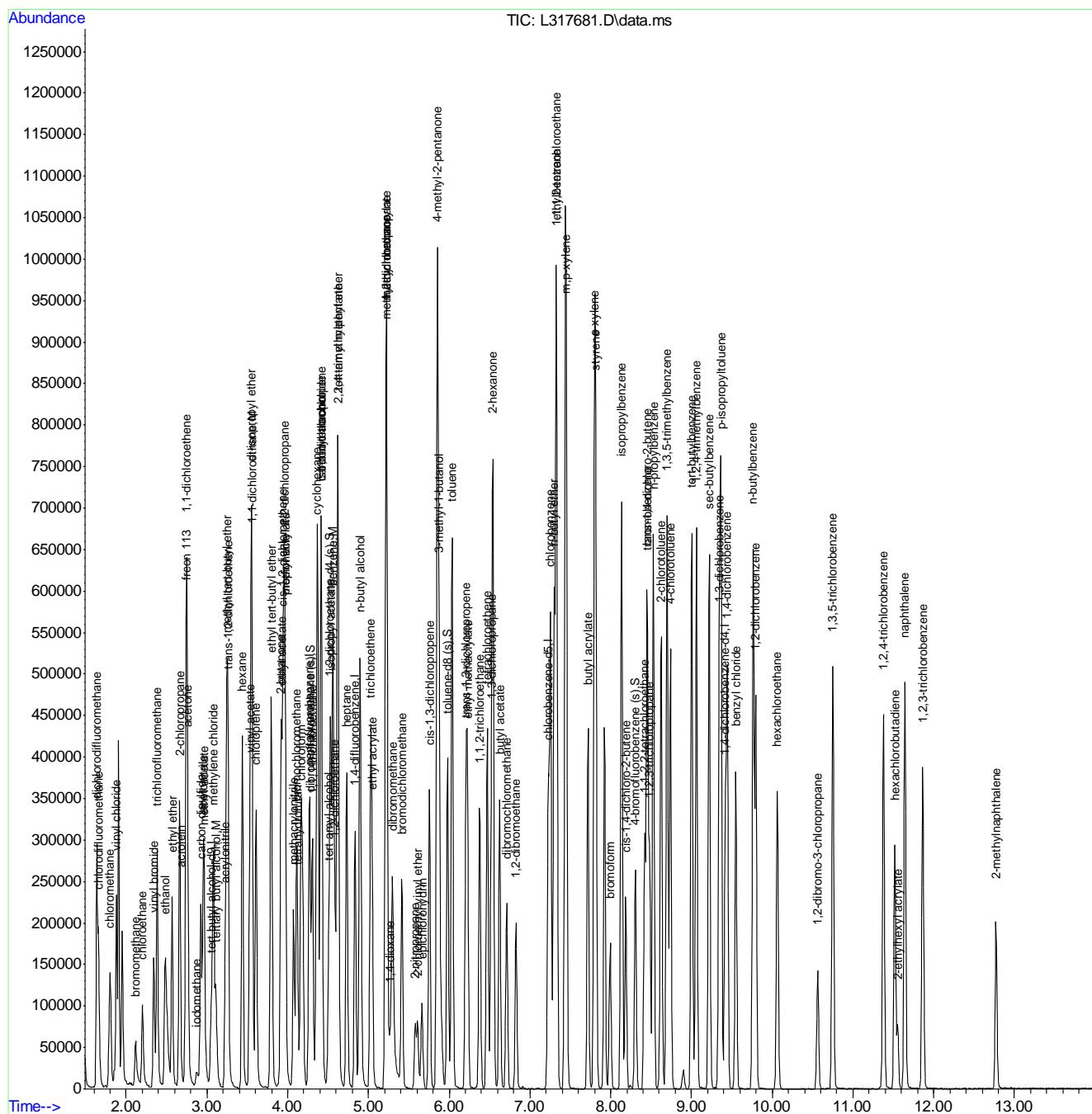
Quant Time: Nov 21 11:30:54 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Please update : Thu Nov 21 11:50:15
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317682.D
 Acq On : 20 Nov 2019 8:28 pm
 Operator : roberts
 Sample : ic9325-200
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 21 11:30:56 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.056	65	95677	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	142330	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.831	114	206136	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	185890	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.419	152	75032	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.272	113	56576	50.81	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	101.62%	
53) 1,2-dichloroethane-d4 (s)	4.526	65	55866	47.77	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery	=	95.54%	
74) toluene-d8 (s)	5.980	98	223223	48.27	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	96.54%	
97) 4-bromofluorobenzene (s)	8.306	95	75988	51.76	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	103.52%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.270	88	94112	5049.13	ug/L	97
3) ethanol	2.485	45	394812	17884.52	ug/L	98
4) tertiary butyl alcohol	3.117	59	208858	956.60	ug/L	93
6) chlorodifluoromethane	1.654	51	290738	199.50	ug/L	98
7) dichlorodifluoromethane	1.631	85	378948	199.39	ug/L	99
8) chloromethane	1.798	50	290249	197.67	ug/L	99
9) vinyl chloride	1.875	62	323631	192.74	ug/L	98
10) bromomethane	2.106	94	80348	229.66	ug/L	93
11) chloroethane	2.190	64	130225	171.27	ug/L	97
12) vinyl bromide	2.334	106	173636	189.72	ug/L	95
13) trichlorofluoromethane	2.379	101	323545	184.59	ug/L	97
14) ethyl ether	2.565	74	129971	185.88	ug/L	91
15) 2-chloropropane	2.655	43	323672	177.00	ug/L	97
16) acrolein	2.668	56	56535	185.36	ug/L	92
17) freon 113	2.735	151	153804	183.43	ug/L	98
18) 1,1-dichloroethene	2.745	96	183159	184.10	ug/L	94
19) acetone	2.761	58	107581	710.47	ug/L	88
20) acetonitrile	2.954	40	200196	1772.70	ug/L	99
21) iodomethane	2.870	142	100787	461.36	ug/L	88
22) iso-butyl alcohol	4.430	43	139092	1721.95	ug/L	93
23) carbon disulfide	2.918	76	473548	185.83	ug/L	100
24) methylene chloride	3.075	84	194589	189.23	ug/L	98
25) methyl acetate	2.960	74	53100	188.64	ug/L	92
26) methyl tert butyl ether	3.242	73	611331	181.56	ug/L	99
27) trans-1,2-dichloroethene	3.258	96	195431	181.70	ug/L	98
28) hexane	3.435	57	293421	191.76	ug/L	96
29) di-isopropyl ether	3.547	45	604000	174.80	ug/L	96
30) ethyl tert-butyl ether	3.794	59	631410	182.82	ug/L	98
31) 2-butanone	3.916	72	152627	735.72	ug/L	94
32) 1,1-dichloroethane	3.554	63	335136	177.89	ug/L	97
33) chloroprene	3.605	53	297998	189.09	ug/L	99
34) acrylonitrile	3.223	53	110666	185.78	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317682.D
 Acq On : 20 Nov 2019 8:28 pm
 Operator : roberts
 Sample : ic9325-200
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 21 11:30:56 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:30:15 2019

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.528	86	56438	187.84	ug/L #	78
36) ethyl acetate	3.923	45	49438	199.31	ug/L #	83
37) 2,2-dichloropropane	3.952	77	273460	179.85	ug/L	97
38) cis-1,2-dichloroethene	3.939	96	208419	182.96	ug/L	99
39) propionitrile	3.968	54	386576	1680.58	ug/L	84
40) methyl acrylate	3.968	85	40773	177.81	ug/L #	85
41) bromochloromethane	4.109	128	99382	176.06	ug/L	91
42) tetrahydrofuran	4.118	72	41467	181.74	ug/L	87
43) chloroform	4.163	83	330735	184.97	ug/L	99
45) methacrylonitrile	4.073	67	113203	185.46	ug/L	96
46) 1,1,1-trichloroethane	4.301	97	311755	196.43	ug/L	99
47) cyclohexane	4.359	84	279775	184.86	ug/L	91
48) 1,1-dichloropropene	4.407	75	256379	187.76	ug/L	99
49) carbon tetrachloride	4.414	117	252235	189.38	ug/L	97
50) isopropyl acetate	4.529	87	62470	184.76	ug/L	95
51) tert amyl alcohol	4.516	55	62798	852.38	ug/L #	72
54) tert-amyl methyl ether	4.616	73	576173	173.67	ug/L	98
55) 2,2,4-trimethylpentane	4.619	57	525666	175.45	ug/L	98
56) n-butyl alcohol	4.908	56	521885	8684.99	ug/L	99
57) benzene	4.558	78	717205	175.24	ug/L	98
58) heptane	4.728	57	136440	199.25	ug/L	94
59) 1,2-dichloroethane	4.584	62	239338	180.02	ug/L	97
60) trichloroethene	5.023	95	206719	192.66	ug/L	98
61) ethyl acrylate	5.046	55	337953	178.34	ug/L	98
62) 2-nitropropane	5.578	41	74409	202.68	ug/L	89
63) 2-chloroethyl vinyl ether	5.607	63	84314	2165.33	ug/L	94
64) methyl methacrylate	5.225	100	72508	183.61	ug/L	95
65) 1,2-dichloropropane	5.222	63	187499	177.58	ug/L	97
66) methylcyclohexane	5.213	83	329543	183.08	ug/L	97
67) dibromomethane	5.293	93	120225	183.05	ug/L	97
68) bromodichloromethane	5.412	83	269958	191.35	ug/L	96
69) cis-1,3-dichloropropene	5.752	75	345539	186.49	ug/L	97
70) epichlorohydrin	5.662	57	143684	921.20	ug/L	97
71) 4-methyl-2-pentanone	5.851	58	426936	672.51	ug/L	91
72) 3-methyl-1-butanol	5.880	70	194473	3376.54	ug/L	91
75) toluene	6.034	92	489101	179.14	ug/L	96
76) trans-1,3-dichloropropene	6.204	75	312765	181.94	ug/L	96
77) ethyl methacrylate	6.227	69	301484	171.97	ug/L	98
78) 1,1,2-trichloroethane	6.377	83	159692	177.16	ug/L	99
79) 2-hexanone	6.541	58	421070	642.53	ug/L	99
80) tetrachloroethene	6.471	166	238724	182.07	ug/L	98
81) 1,3-dichloropropane	6.522	76	301793	174.37	ug/L	97
82) butyl acetate	6.621	56	178127	174.20	ug/L	96
83) dibromochloromethane	6.711	129	220923	185.18	ug/L	98
84) 1,2-dibromoethane	6.827	107	246927	182.72	ug/L	99
85) n-butyl ether	7.298	57	766235	167.76	ug/L	97
86) chlorobenzene	7.253	112	552057	180.62	ug/L	94
87) 1,1,1,2-tetrachloroethane	7.321	131	185953	173.95	ug/L	98
88) ethylbenzene	7.330	91	813515	165.86	ug/L	95
89) m,p-xylene	7.443	106	665633	342.84	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317682.D
 Acq On : 20 Nov 2019 8:28 pm
 Operator : roberts
 Sample : ic9325-200
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 21 11:30:56 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:30:15 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.799	106	339439	175.98	ug/L	93
91) butyl acrylate	7.719	55	463311	171.65	ug/L	98
92) styrene	7.815	104	538803	167.53	ug/L	98
93) bromoform	7.995	173	160243	183.52	ug/L	98
94) isopropylbenzene	8.133	105	852085	170.47	ug/L	98
95) cis-1,4-dichloro-2-butene	8.187	88	102431	191.81	ug/L	93
98) bromobenzene	8.447	156	226300	193.65	ug/L	99
99) 1,1,2,2-tetrachloroethane	8.418	83	276172	189.92	ug/L	98
100) trans-1,4-dichloro-2-b...	8.457	53	72438	194.93	ug/L	93
101) 1,2,3-trichloropropane	8.482	110	80849	182.80	ug/L	96
102) n-propylbenzene	8.527	91	902981	182.16	ug/L	95
103) 2-chlorotoluene	8.624	126	208768	192.45	ug/L	97
104) 4-chlorotoluene	8.742	126	197885	189.85	ug/L	88
105) 1,3,5-trimethylbenzene	8.697	105	656801	184.79	ug/L	95
106) tert-butylbenzene	9.002	119	605344	191.47	ug/L	98
107) 1,2,4-trimethylbenzene	9.060	105	653624	183.78	ug/L	97
108) sec-butylbenzene	9.221	105	831593	186.86	ug/L	96
109) 1,3-dichlorobenzene	9.346	146	392859	192.41	ug/L	97
110) p-isopropyltoluene	9.365	119	667790	182.35	ug/L	98
111) 1,4-dichlorobenzene	9.442	146	379778	191.98	ug/L	98
112) 1,2-dichlorobenzene	9.795	146	362064	186.31	ug/L	96
113) n-butylbenzene	9.766	92	361623	201.99	ug/L	95
114) 1,2-dibromo-3-chloropr...	10.565	157	90411	209.84	ug/L	96
115) 1,3,5-trichlorobenzene	10.751	180	321718	205.10	ug/L	95
116) 1,2,4-trichlorobenzene	11.380	180	292568	211.28	ug/L	96
117) hexachlorobutadiene	11.518	225	118285	207.74	ug/L	96
118) naphthalene	11.643	128	750507	196.70	ug/L	98
119) 1,2,3-trichlorobenzene	11.865	180	253394	211.70	ug/L	99
120) hexachloroethane	10.061	119	143509	215.10	ug/L	97
121) benzyl chloride	9.551	91	514458	192.93	ug/L	97
122) 2-ethylhexyl acrylate	11.553	70	38677	43.79	ug/L	96
123) 2-methylnaphthalene	12.773	142	206286	107.07	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317682.D
Acq On : 20 Nov 2019 8:28 pm
Operator : roberts
Sample : ic9325-200
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

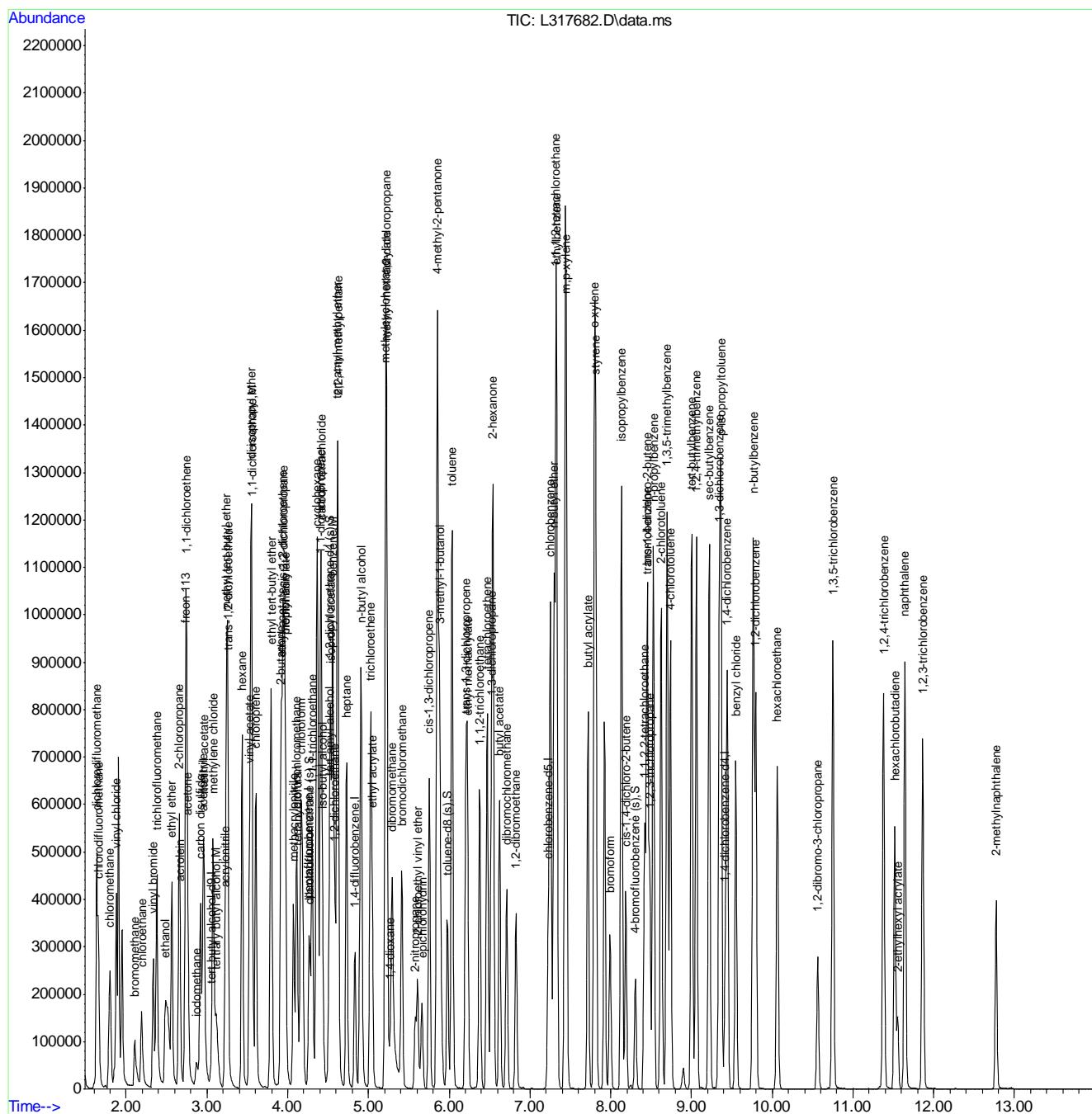
Quant Time: Nov 21 11:30:56 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:30:15 2019

Please update : Thu Nov 21 11:50:15
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317685.D
 Acq On : 20 Nov 2019 9:49 pm
 Operator : roberts
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 22 12:05:42 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	121378	500.00	ug/L	0.00
5) pentafluorobenzene	4.269	168	164964	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.837	114	235296	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	201974	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	90157	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.279	113	65964	51.18	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.36%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	71366	52.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	105.92%	
74) toluene-d8 (s)	5.983	98	252526	48.24	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.48%	
97) 4-bromofluorobenzene (s)	8.306	95	88224	50.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.94%	
Target Compounds						
				Qvalue		
2) 1,4-dioxane	5.271	88	29449	1209.74	ug/L	86
3) ethanol	2.482	45	141871	5198.37	ug/L	97
4) tertiary butyl alcohol	3.108	59	70655	257.61	ug/L	93
6) chlorodifluoromethane	1.654	51	84330	53.87	ug/L	99
7) dichlorodifluoromethane	1.635	85	80525	38.64	ug/L	99
8) chloromethane	1.798	50	71909	43.15	ug/L	99
9) vinyl chloride	1.875	62	79760	43.05	ug/L	97
10) bromomethane	2.123	94	26523	61.58	ug/L	94
11) chloroethane	2.206	64	35167	41.51	ug/L	99
12) vinyl bromide	2.344	106	50940	50.40	ug/L	97
13) trichlorofluoromethane	2.386	101	90522	47.32	ug/L	99
14) ethyl ether	2.572	74	38228	50.88	ug/L	91
15) 2-chloropropane	2.662	43	105231	50.25	ug/L	97
16) acrolein	2.675	56	17527	52.09	ug/L	94
17) freon 113	2.745	151	52601	58.02	ug/L	97
18) 1,1-dichloroethene	2.752	96	53684	46.62	ug/L	92
19) acetone	2.761	58	58835	355.00	ug/L	91
20) acetonitrile	2.957	40	73620	574.28	ug/L	99
21) iodomethane	2.870	142	13915	48.63	ug/L	87
22) iso-butyl alcohol	4.417	43	50296	553.99	ug/L	96
23) carbon disulfide	2.925	76	167071	55.79	ug/L	98
24) methylene chloride	3.082	84	58029	50.30	ug/L	98
25) methyl acetate	2.966	74	15380	51.28	ug/L	90
26) methyl tert butyl ether	3.246	73	358969	93.83	ug/L	98
27) trans-1,2-dichloroethene	3.265	96	58452	48.12	ug/L	99
28) hexane	3.441	57	77316	47.26	ug/L	95
29) di-isopropyl ether	3.554	45	186948	45.87	ug/L	94
30) ethyl tert-butyl ether	3.801	59	182847	46.99	ug/L	99
31) 2-butanone	3.916	72	60103	273.71	ug/L #	78
32) 1,1-dichloroethane	3.560	63	108080	50.55	ug/L	96
33) chloroprene	3.611	53	93694	53.29	ug/L	97
34) acrylonitrile	3.230	53	35457	55.73	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317685.D
 Acq On : 20 Nov 2019 9:49 pm
 Operator : roberts
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 22 12:05:42 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
35) vinyl acetate	3.531	86	13178	40.33	ug/L	# 89
36) ethyl acetate	3.926	45	13662	48.44	ug/L	# 64
37) 2,2-dichloropropane	3.955	77	82585	46.24	ug/L	96
38) cis-1,2-dichloroethene	3.945	96	63680	48.28	ug/L	95
39) propionitrile	3.968	54	134021	514.69	ug/L	99
40) methyl acrylate	3.974	85	13532	52.08	ug/L	# 70
41) bromochloromethane	4.115	128	32079	49.35	ug/L	89
42) tetrahydrofuran	4.122	72	12896	50.63	ug/L	95
43) chloroform	4.170	83	103150	48.68	ug/L	94
45) methacrylonitrile	4.074	67	35121	51.57	ug/L	96
46) 1,1,1-trichloroethane	4.308	97	88195	49.14	ug/L	98
47) cyclohexane	4.366	84	76733	43.94	ug/L	98
48) 1,1-dichloropropene	4.414	75	78114	48.81	ug/L	95
49) carbon tetrachloride	4.423	117	76033	50.89	ug/L	99
50) isopropyl acetate	4.529	87	18093	48.58	ug/L	92
51) tert amyl alcohol	4.513	55	21686	270.04	ug/L	90
54) tert-amyl methyl ether	4.622	73	166801	44.20	ug/L	100
55) 2,2,4-trimethylpentane	4.622	57	168438	53.42	ug/L	98
56) n-butyl alcohol	4.895	56	173182	2775.15	ug/L	99
57) benzene	4.565	78	227909	48.82	ug/L	99
58) heptane	4.735	57	43413	58.89	ug/L	91
59) 1,2-dichloroethane	4.587	62	71332	45.58	ug/L	96
60) trichloroethene	5.030	95	61358	50.15	ug/L	99
61) ethyl acrylate	5.049	55	104492	49.73	ug/L	98
62) 2-nitropropane	5.582	41	21182	54.29	ug/L	80
63) 2-chloroethyl vinyl ether	5.614	63	14379	319.37	ug/L	94
64) methyl methacrylate	5.226	100	21958	49.73	ug/L	92
65) 1,2-dichloropropane	5.226	63	57173	47.74	ug/L	92
66) methylcyclohexane	5.219	83	93148	50.05	ug/L	95
67) dibromomethane	5.299	93	34945	46.99	ug/L	97
68) bromodichloromethane	5.418	83	76367	49.26	ug/L	97
69) cis-1,3-dichloropropene	5.755	75	103073	49.85	ug/L	97
70) epichlorohydrin	5.665	57	45980	306.85	ug/L	98
71) 4-methyl-2-pentanone	5.851	58	141467	204.56	ug/L	99
72) 3-methyl-1-butanol	5.874	70	66625	1132.21	ug/L	95
75) toluene	6.037	92	146286	48.20	ug/L	98
76) trans-1,3-dichloropropene	6.211	75	93290	50.72	ug/L	99
77) ethyl methacrylate	6.227	69	95889	50.69	ug/L	98
78) 1,1,2-trichloroethane	6.381	83	48235	49.32	ug/L	99
79) 2-hexanone	6.544	58	156156	220.12	ug/L	99
80) tetrachloroethene	6.474	166	103730	70.58	ug/L	100
81) 1,3-dichloropropane	6.525	76	92119	47.28	ug/L	99
82) butyl acetate	6.625	56	55472	50.38	ug/L	98
83) dibromochloromethane	6.715	129	67493	52.25	ug/L	98
84) 1,2-dibromoethane	6.830	107	72780	50.25	ug/L	97
85) n-butyl ether	7.299	57	254848	51.84	ug/L	100
86) chlorobenzene	7.254	112	167368	50.55	ug/L	98
87) 1,1,1,2-tetrachloroethane	7.324	131	58581	51.70	ug/L	96
88) ethylbenzene	7.331	91	264408	48.25	ug/L	99
89) m,p-xylene	7.446	106	211659	96.30	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317685.D
 Acq On : 20 Nov 2019 9:49 pm
 Operator : roberts
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 22 12:05:42 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
90) o-xylene	7.799	106	105374	49.58	ug/L	98
91) butyl acrylate	7.719	55	145716	50.48	ug/L	98
92) styrene	7.815	104	174249	49.51	ug/L	100
93) bromoform	7.992	173	51979	56.73	ug/L	97
94) isopropylbenzene	8.136	105	272482	49.73	ug/L	99
95) cis-1,4-dichloro-2-butene	8.187	88	29180	57.07	ug/L	98
98) bromobenzene	8.451	156	70305	51.79	ug/L	98
99) 1,1,2,2-tetrachloroethane	8.418	83	86052	53.48	ug/L	97
100) trans-1,4-dichloro-2-b...	8.454	53	21781	54.68	ug/L	91
101) 1,2,3-trichloropropane	8.483	110	25005	50.63	ug/L	94
102) n-propylbenzene	8.528	91	298578	50.77	ug/L	99
103) 2-chlorotoluene	8.624	126	64086	51.21	ug/L	99
104) 4-chlorotoluene	8.739	126	62498	52.33	ug/L	99
105) 1,3,5-trimethylbenzene	8.698	105	211234	50.13	ug/L	98
106) tert-butylbenzene	9.006	119	193622	50.97	ug/L	98
107) 1,2,4-trimethylbenzene	9.060	105	212044	49.95	ug/L	97
108) sec-butylbenzene	9.221	105	259669	51.47	ug/L	99
109) 1,3-dichlorobenzene	9.346	146	124930	52.27	ug/L	96
110) p-isopropyltoluene	9.365	119	220498	51.22	ug/L	98
111) 1,4-dichlorobenzene	9.442	146	117711	50.29	ug/L	97
112) 1,2-dichlorobenzene	9.795	146	114950	51.21	ug/L	98
113) n-butylbenzene	9.766	92	106743	54.34	ug/L	99
114) 1,2-dibromo-3-chloropr...	10.562	157	24733	53.74	ug/L	96
115) 1,3,5-trichlorobenzene	10.751	180	94834	55.06	ug/L	93
116) 1,2,4-trichlorobenzene	11.380	180	80169	53.49	ug/L	96
117) hexachlorobutadiene	11.518	225	33119	52.91	ug/L	94
118) naphthalene	11.640	128	226742	54.87	ug/L	98
119) 1,2,3-trichlorobenzene	11.862	180	71520	54.47	ug/L	96
120) hexachloroethane	10.065	119	41031	55.65	ug/L	96
121) benzyl chloride	9.551	91	189260	63.97	ug/L	99
122) 2-ethylhexyl acrylate	11.554	70	11201	11.72	ug/L	91
123) 2-methylnaphthalene	12.773	142	58632	25.39	ug/L	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
Data File : L317685.D
Acq On : 20 Nov 2019 9:49 pm
Operator : roberts
Sample : icv9325-50
Misc : MS39191,VL9325,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

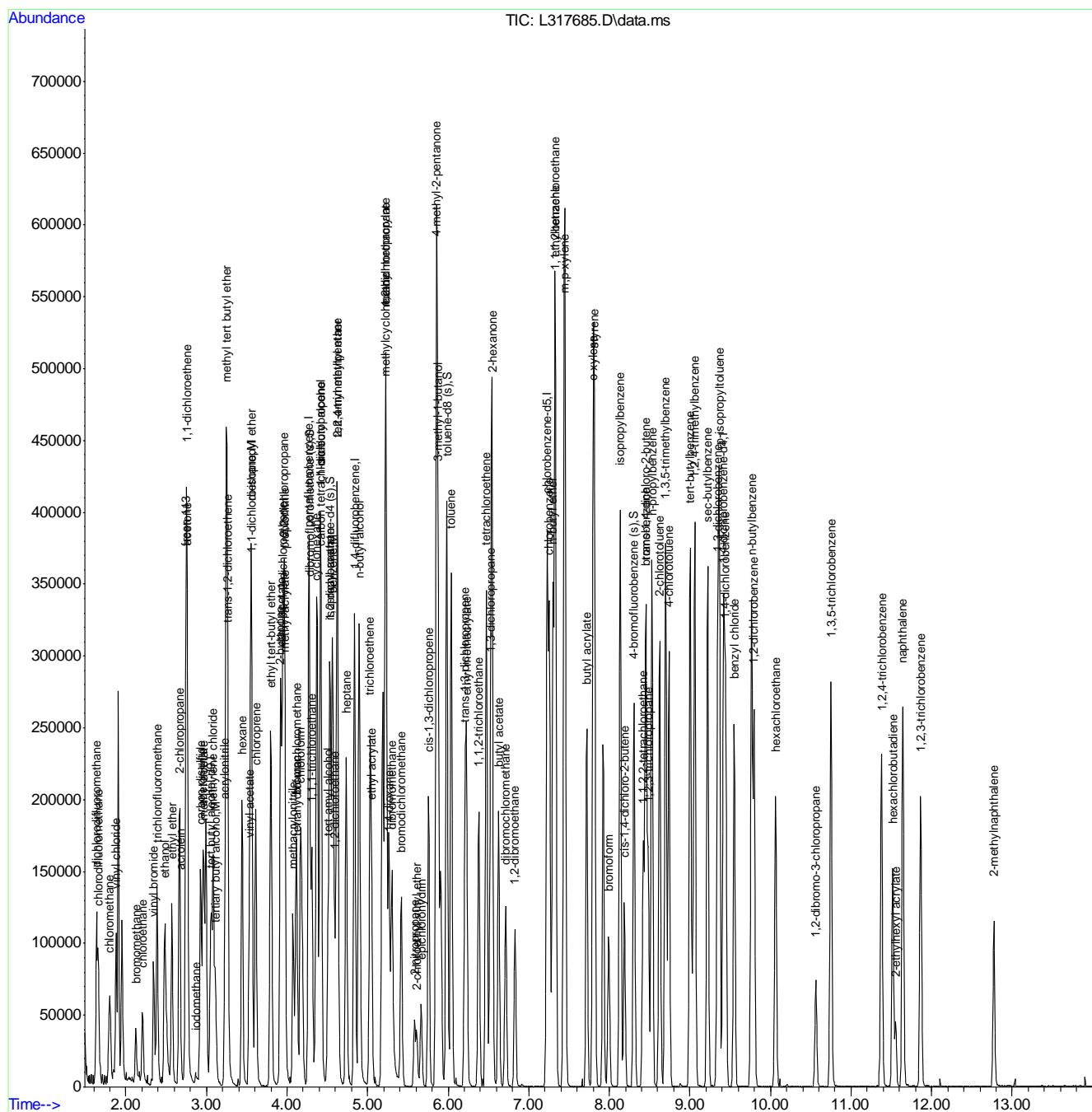
Quant Time: Nov 22 12:05:42 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

Last Update : Thu Nov 21 11:59:45 2019

Please update : Thu Nov 21 11:59:15
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317686.D
 Acq On : 20 Nov 2019 10:16 pm
 Operator : roberts
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 22 12:06:26 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.053	65	121423	500.00	ug/L	0.00
5) pentafluorobenzene	4.269	168	185565	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.837	114	254456	50.00	ug/L	0.00
73) chlorobenzene-d5	7.228	117	204473	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.420	152	97154	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.279	113	69958	48.26	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	96.52%	
53) 1,2-dichloroethane-d4 (s)	4.533	65	71795	49.26	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery	=	98.52%	
74) toluene-d8 (s)	5.983	98	279124	52.67	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	105.34%	
97) 4-bromofluorobenzene (s)	8.306	95	91918	48.80	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	97.60%	
<hr/>						
Target Compounds						
					Qvalue	
20) acetonitrile	2.957	40	66012	457.77	ug/L	94
34) acrylonitrile	3.226	53	37101	51.84	ug/L	94
80) tetrachloroethene	6.474	166	74011	49.75	ug/L	97
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317686.D
 Acq On : 20 Nov 2019 10:16 pm
 Operator : roberts
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

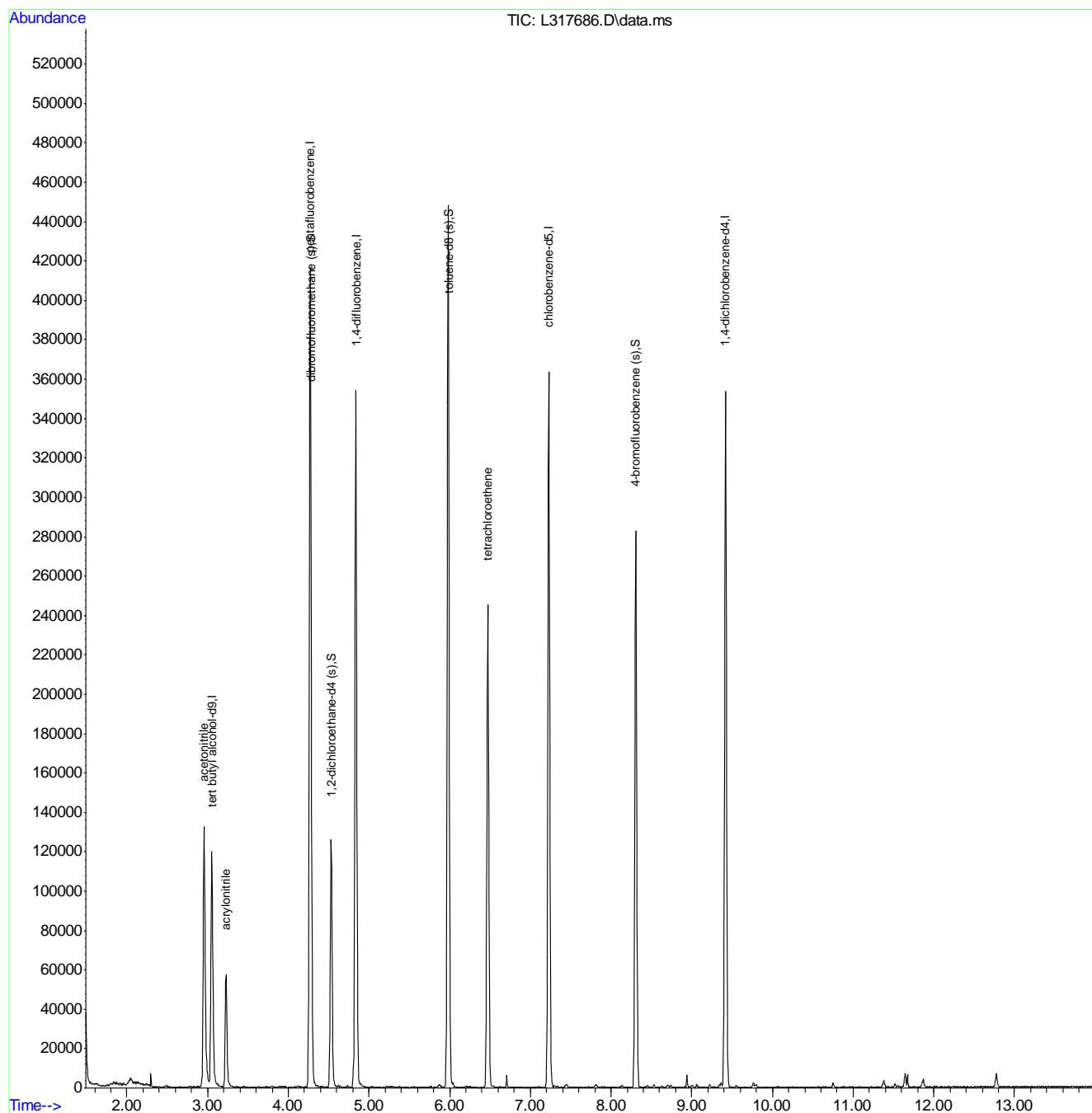
Quant Time: Nov 22 12:06:26 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317695.D
 Acq On : 21 Nov 2019 8:40 pm
 Operator : brittank
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 22 12:07:21 2019
 Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M
 Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um
 QLast Update : Thu Nov 21 11:59:45 2019
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	128079	500.00	ug/L	0.00
5) pentafluorobenzene	4.266	168	189533	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.834	114	271236	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	225587	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.416	152	108055	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.276	113	76829	51.89	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	103.78%	
53) 1,2-dichloroethane-d4 (s)	4.529	65	79948	51.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	102.92%	
74) toluene-d8 (s)	5.976	98	295300	50.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.02%	
97) 4-bromofluorobenzene (s)	8.303	95	102222	48.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.60%	
<hr/>						
Target Compounds						
19) acetone	2.761	58	35469	186.27	ug/L	87
31) 2-butanone	3.913	72	51049	202.34	ug/L #	59

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VL9325\
 Data File : L317695.D
 Acq On : 21 Nov 2019 8:40 pm
 Operator : brittank
 Sample : icv9325-50
 Misc : MS39191,VL9325,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

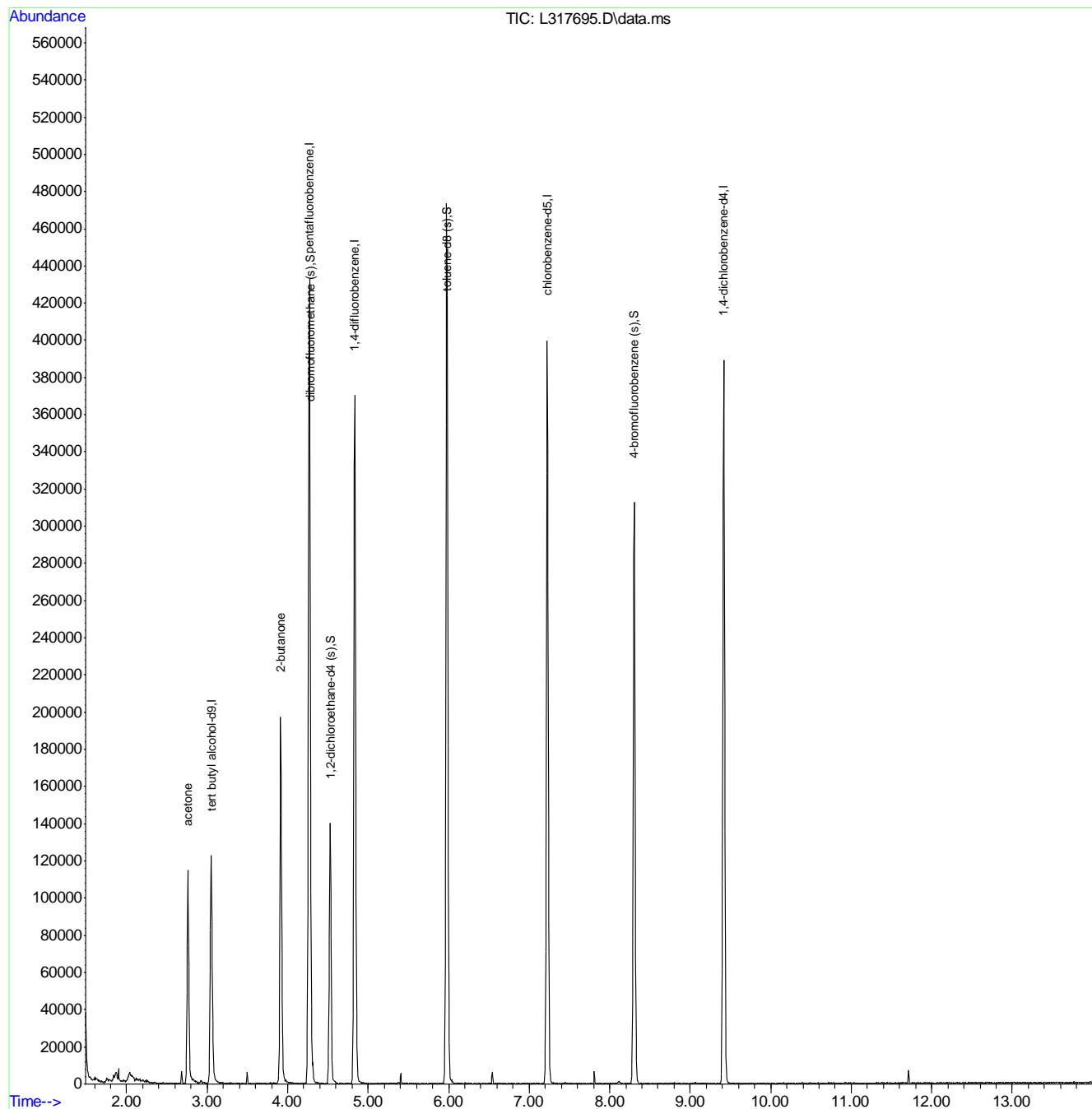
Quant Time: Nov 22 12:07:21 2019

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319837.d
 Acq On : 18 Feb 2020 6:51 am
 Operator : edwardd
 Sample : cc9325-20 Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 07:08:54 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	3.050	65	99784	500.00	ug/L	0.00
5) pentafluorobenzene	4.263	168	181427	50.00	ug/L	0.00
52) 1,4-difluorobenzene	4.828	114	240688	50.00	ug/L	0.00
73) chlorobenzene-d5	7.225	117	199941	50.00	ug/L	0.00
96) 1,4-dichlorobenzene-d4	9.417	152	87726	50.00	ug/L	0.00
System Monitoring Compounds						
44) dibromofluoromethane (s)	4.273	113	64641	45.61	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.22%	
53) 1,2-dichloroethane-d4 (s)	4.523	65	62697	45.48	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	90.96%	
74) toluene-d8 (s)	5.973	98	254932	49.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.40%	
97) 4-bromofluorobenzene (s)	8.303	95	82685	48.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.24%	
Target Compounds						
2) 1,4-dioxane	5.261	88	11643	581.79	ug/L	90
3) ethanol	2.476	45	53221	2372.11	ug/L	99
4) tertiary butyl alcohol	3.105	59	25465	112.94	ug/L	98
6) chlorodifluoromethane	1.648	51	43405	25.21	ug/L	93
7) dichlorodifluoromethane	1.635	85	42686	18.63	ug/L	97
8) chloromethane	1.789	50	38928	21.24	ug/L	99
9) vinyl chloride	1.876	62	45964	22.56	ug/L	99
10) bromomethane	2.129	94	9549	20.16	ug/L	98
11) chloroethane	2.209	64	22440	24.08	ug/L	99
12) vinyl bromide	2.344	106	24009	21.60	ug/L	96
13) trichlorofluoromethane	2.386	101	44864	21.32	ug/L	96
14) ethyl ether	2.569	74	19950	24.14	ug/L	92
15) 2-chloropropane	2.662	43	52007	22.58	ug/L	96
16) acrolein	2.668	56	7819	21.13	ug/L	100
17) freon 113	2.742	151	26333	26.41	ug/L	93
18) 1,1-dichloroethene	2.748	96	29702	23.46	ug/L	89
19) acetone	2.758	58	14089	77.30	ug/L	86
20) acetonitrile	2.951	40	27400	194.34	ug/L	99
21) iodomethane	2.858	142	2607	8.28	ug/L	92
22) iso-butyl alcohol	4.414	43	18434	184.62	ug/L	96
23) carbon disulfide	2.922	76	75312	22.87	ug/L	99
24) methylene chloride	3.076	84	29676	23.39	ug/L	98
25) methyl acetate	2.967	74	7039	21.34	ug/L	99
26) methyl tert butyl ether	3.243	73	87329	20.76	ug/L	98
27) trans-1,2-dichloroethene	3.259	96	30388	22.75	ug/L	97
28) hexane	3.438	57	46238	25.70	ug/L	97
29) di-isopropyl ether	3.547	45	95598	21.33	ug/L	94
30) ethyl tert-butyl ether	3.795	59	91285	21.33	ug/L	97
31) 2-butanone	3.913	72	19273	79.81	ug/L	98
32) 1,1-dichloroethane	3.554	63	51502	21.90	ug/L	98
33) chloroprene	3.605	53	43089	22.28	ug/L	95
34) acrylonitrile	3.220	53	14483	20.70	ug/L	88
35) vinyl acetate	3.525	86	8212	22.85	ug/L #	56
36) ethyl acetate	3.920	45	6565	21.17	ug/L #	66
37) 2,2-dichloropropane	3.949	77	40486	20.61	ug/L	97
38) cis-1,2-dichloroethene	3.942	96	32764	22.58	ug/L	95
39) propionitrile	3.961	54	47946	167.42	ug/L	86
40) methyl acrylate	3.968	85	5508	19.28	ug/L #	91
41) bromochloromethane	4.109	128	15580	21.79	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319837.d
 Acq On : 18 Feb 2020 6:51 am
 Operator : edwardd
 Sample : cc9325-20 Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 07:08:54 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
42) tetrahydrofuran	4.115	72	5432	19.39	ug/L	94
43) chloroform	4.160	83	47012	20.17	ug/L	94
45) methacrylonitrile	4.067	67	14895	19.89	ug/L	91
46) 1,1,1-trichloroethane	4.298	97	39527	20.02	ug/L	94
47) cyclohexane	4.363	84	38893	20.25	ug/L	91
48) 1,1-dichloropropene	4.407	75	36600	20.80	ug/L	98
49) carbon tetrachloride	4.414	117	33058	20.12	ug/L	97
50) isopropyl acetate	4.526	87	8292	20.24	ug/L #	86
51) tert amyl alcohol	4.501	55	7743	87.67	ug/L	96
54) tert-amyl methyl ether	4.613	73	84419	21.87	ug/L	97
55) 2,2,4-trimethylpentane	4.616	57	78825	24.44	ug/L	97
56) n-butyl alcohol	4.886	56	61362	961.27	ug/L	99
57) benzene	4.555	78	110813	23.21	ug/L	99
58) heptane	4.732	57	19165	25.42	ug/L	81
59) 1,2-dichloroethane	4.581	62	31764	19.84	ug/L	95
60) trichloroethylene	5.024	95	27656	22.10	ug/L	93
61) ethyl acrylate	5.040	55	45078	20.97	ug/L	100
62) 2-nitropropane	5.576	41	7311	18.32	ug/L	98
63) 2-chloroethyl vinyl ether	5.604	63	10244	222.43	ug/L	95
64) methyl methacrylate	5.223	100	9760	21.61	ug/L #	84
65) 1,2-dichloropropane	5.223	63	27833	22.72	ug/L	84
66) methylcyclohexane	5.213	83	45820	24.07	ug/L	99
67) dibromomethane	5.290	93	16649	21.88	ug/L	99
68) bromodichloromethane	5.412	83	34701	21.88	ug/L	94
69) cis-1,3-dichloropropene	5.749	75	45583	21.55	ug/L	94
70) epichlorohydrin	5.659	57	11387	74.29	ug/L	95
71) 4-methyl-2-pentanone	5.845	58	60228	85.14	ug/L	95
72) 3-methyl-1-butanol	5.868	70	23069	383.25	ug/L	97
75) toluene	6.031	92	68503	22.80	ug/L	100
76) trans-1,3-dichloropropene	6.201	75	38493	21.14	ug/L	97
77) ethyl methacrylate	6.224	69	40846	21.81	ug/L	93
78) 1,1,2-trichloroethane	6.375	83	22815	23.57	ug/L	92
79) 2-hexanone	6.538	58	56873	80.98	ug/L	96
80) tetrachloroethene	6.464	166	34765	23.90	ug/L	90
81) 1,3-dichloropropane	6.516	76	42151	21.85	ug/L	100
82) butyl acetate	6.618	56	23092	21.19	ug/L	89
83) dibromochloromethane	6.708	129	28163	22.02	ug/L	98
84) 1,2-dibromoethane	6.821	107	30717	21.43	ug/L	98
85) n-butyl ether	7.292	57	114491	23.53	ug/L	98
86) chlorobenzene	7.251	112	72236	22.04	ug/L	95
87) 1,1,1,2-tetrachloroethane	7.321	131	25004	22.29	ug/L	97
88) ethylbenzene	7.324	91	120793	22.27	ug/L	97
89) m,p-xylene	7.440	106	94061	43.23	ug/L	99
90) o-xylene	7.793	106	47530	22.59	ug/L	86
91) butyl acrylate	7.713	55	58436	20.45	ug/L	98
92) styrene	7.812	104	78133	22.43	ug/L	99
93) bromoform	7.989	173	19902	21.94	ug/L	96
94) isopropylbenzene	8.130	105	117729	21.71	ug/L	97
95) cis-1,4-dichloro-2-butene	8.184	88	9314	18.40	ug/L	97
98) bromobenzene	8.447	156	31766	24.05	ug/L	95
99) 1,1,2,2-tetrachloroethane	8.415	83	35385	22.60	ug/L	96
100) trans-1,4-dichloro-2-b...	8.454	53	7043	18.17	ug/L	93
101) 1,2,3-trichloropropane	8.480	110	10269	21.37	ug/L	95
102) n-propylbenzene	8.524	91	127134	22.22	ug/L	97
103) 2-chlorotoluene	8.621	126	27644	22.70	ug/L	97
104) 4-chlorotoluene	8.733	126	26717	22.99	ug/L	90
105) 1,3,5-trimethylbenzene	8.695	105	87015	21.22	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
 Data File : 1319837.d
 Acq On : 18 Feb 2020 6:51 am
 Operator : edwardd
 Sample : cc9325-20 Inst : GCMSL
 Misc : MS41177,VL9424,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

Quant Results File: ML9325.RES

Quant Time: Feb 18 07:08:54 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
106) tert-butylbenzene	8.999	119	77564	20.98	ug/L	96
107) 1,2,4-trimethylbenzene	9.057	105	89112	21.57	ug/L	97
108) sec-butylbenzene	9.218	105	108613	22.12	ug/L	95
109) 1,3-dichlorobenzene	9.343	146	52105	22.41	ug/L	98
110) p-isopropyltoluene	9.362	119	89921	21.47	ug/L	99
111) 1,4-dichlorobenzene	9.439	146	51479	22.60	ug/L	96
112) 1,2-dichlorobenzene	9.795	146	48726	22.31	ug/L	97
113) n-butylbenzene	9.760	92	42288	22.12	ug/L	98
114) 1,2-dibromo-3-chloropr...	10.562	157	7906	17.66	ug/L	90
115) 1,3,5-trichlorobenzene	10.748	180	36664	21.88	ug/L	97
116) 1,2,4-trichlorobenzene	11.377	180	30637	21.01	ug/L	97
117) hexachlorobutadiene	11.512	225	13565	22.27	ug/L	92
118) naphthalene	11.640	128	75745	18.84	ug/L	100
119) 1,2,3-trichlorobenzene	11.862	180	26035	20.38	ug/L	94
120) hexachloroethane	10.062	119	14157	19.73	ug/L	90
121) benzyl chloride	9.548	91	58775	20.42	ug/L	98
122) 2-ethylhexyl acrylate	11.547	70	959	1.03	ug/L #	69
123) 2-methylnaphthalene	12.776	142	7609	5.07	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kristelv\february 2020\02192020\vl9424\
Data File : 1319837.d
Acq On : 18 Feb 2020 6:51 am
Operator : edwardd
Sample : cc9325-20 Inst : GCMSL
Misc : MS41177,VL9424,5,,,1
ALS Vial : 2 Sample Multiplier: 1

Inst : GCMSI

Quant Method : C:\MSDCHEM\1\METHODS\ML9325.M

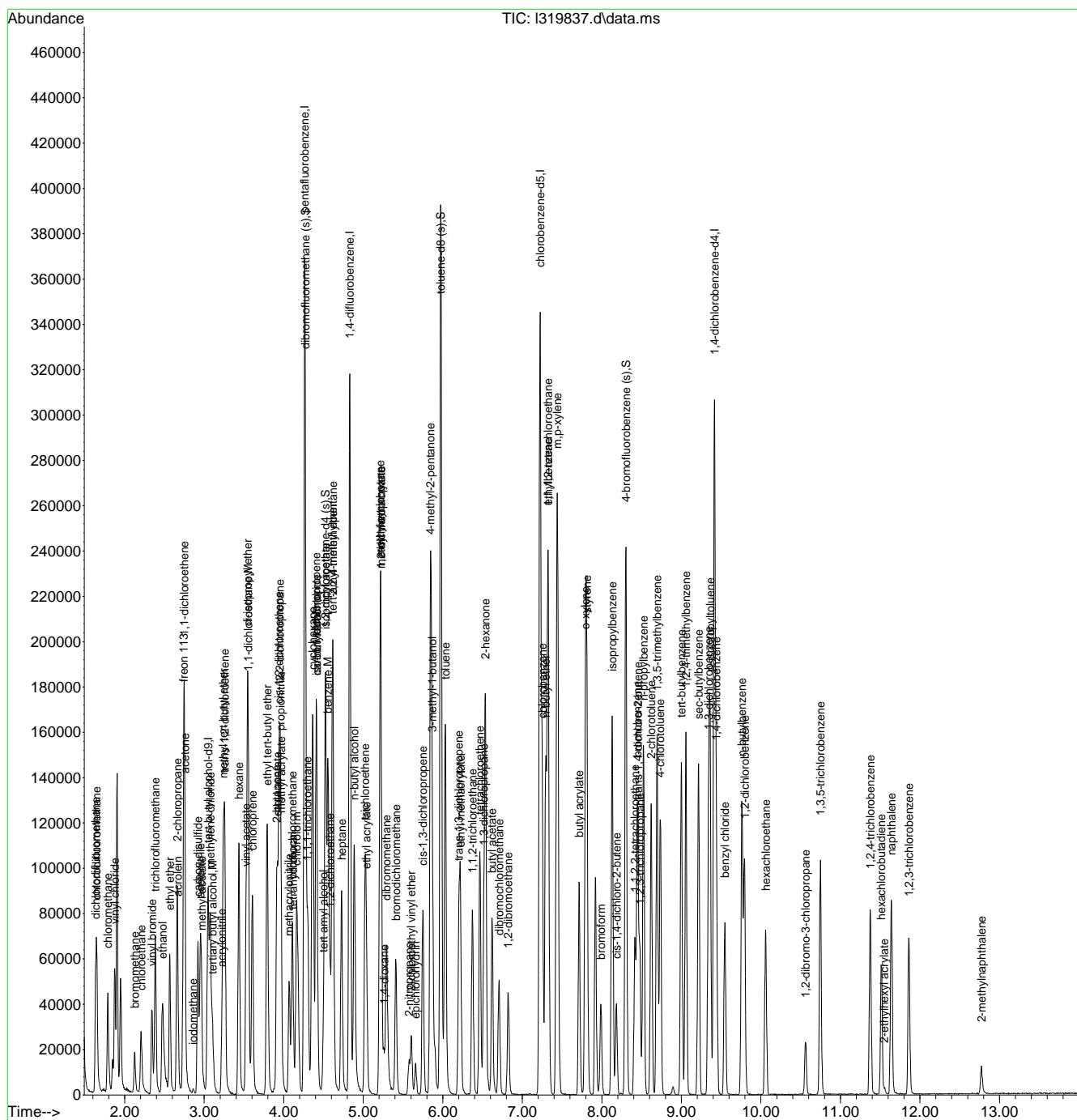
Quant Results File: ML9325.RES

Quant Time: Feb 18 07:08:54 2020

Quant Title : SW846 Method V8260C, column ZB-624 60m x 0.25mm x 1.4 um

QLast Update : Thu Nov 21 11:59:45 2019

Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents				Lot #		Column			
Standards	ABK: v019-2692-77-22	EC: v019-2692-79-5		Acrolein: v019-2692-44-54		Method		RX1624(30mx0.25mmx1.4um)	V8260C
Standard Concentrations	100-10,000 ppm	100ppm		100ppm		Init Calib Date			2/4/2020
Expiration Date	3/4/2020	2/10/2020		2/10/2020					
Standards	Ext ABK: v019-2692-78-1	Ext EC: v019-2692-73-3		Ext Acrolein: v019-2692-76-1	Ext PA: v019-2692-45-2	Analysis Date			2/4/2020
Standard Concentrations	100-10,000 ppm	100 ppm		100 ppm	100/1000 ppm	Sequence loaded by			Robert Szot
Expiration Date	3/4/2020	2/6/2020		3/2/2020	2/10/2020	Data processed by			Robert Szot
Internal Surrogate	v019-2692-83					Batch ID			\V2A8671
Internal Surrogate Concentration	250/2500ppm					Matrix			AQ
Expiration Date	3/4/2020					Approved By:			KANYAV
						Initial Calibration Method	M2A8671	Approved Date:	2/6/2020 5:11:21 PM

Data File	Sample ID	Bot	#	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2A	200465	BFB		NA			5			1	ok	3:37pm
2A	200466	IC8671-0-2		NA		8260 initial calibration	5			2	ok	1 uL ABK, EC, Acrolein / 500 mL DI H2O
2A	200467	IC8671-0-5		NA		8260 initial calibration	5			3	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
2A	200468	IC8671-1		NA		8260 initial calibration	5			4	ok	5 uL ABK, EC, Acrolein / 500 mL DI H2O
2A	200469	IC8671-2		NA		8260 initial calibration	5			5	ok	2 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200470	IC8671-4		NA		8260 initial calibration	5			6	ok	4 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200471	IC8671-8		NA		8260 initial calibration	5			7	ok	8 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200472	IC8671-20		NA		8260 initial calibration	5			8	ok	20 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200473	ICCC8671-50		NA		8260 initial calibration	5			9	ok	50 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200474	IC8671-100		NA		8260 initial calibration	5			10	ok	100 uL ABK, EC, Acrolein / 100 mL DI H2O
2A	200475	IC8671-200		NA		8260 initial calibration	5			11	ok	200 uL ABK, EC, Acrolein / 100 mL DI H2O

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2A	200476	IB	NA			5			12	ok	
2A	200477	IB	NA			5			13	ok	
2A	200478	ICV8671-50	NA		8260 initial calibration	5			14	ok	50 uL Ext ABK, Ext EC, Ext Acrolein / 100 mL DI H2O
2A	200479	ICV8671-50	NA		8260 initial calibration	5			15	ok	50 uL Ext PA / 100 mL DI H2O

GCMS Volatile Run Log

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2A 200802	IB		NA			5			1	ok	
2A 200803	BFB/CC8671-20		NA			5			2	ok/ok	20ul abk, ec,acrolein/100ml, 7:12am
2A 200804	BS		NA			5			3	ok	50ul abk, ec,acrolein/100ml
2A 200805	IB		NA			5			4	ok	
2A 200806	MB		NA			5			5	ok	
2A 200807	JD3176-5	2	NA	MS41142	V8260BENZ, VLS	5			1	6	ok
2A 200808	JD3176-3	2	NA	MS41142	V8260TICS+	5			1	7	ok
2A 200809	JD3176-4	2	NA	MS41142	V8260BENZ, VLS	5			1	8	ok
2A 200810	IB		NA			5			9	ok	
2A 200811	JD3300-1	2	10x	MS41191	V8260MASTD	5/50			1	10	ok
2A 200812	JD3162-1	8	10x	MS41135	V8260PCE,DCE,T12 DCE TCE VC	5/50			1	11	ok

OR048-01
Bay Date: 12/1

Bage 1 af 3

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2A	200813	JD3164-5	2	NA	MS41135	V8260TCL20+ V8260PCE,DCE,T12 DCE,TCE\VC	5		1	12	ok
2A	200814	JD3162-1MS	8	10x	MS41135	V8260PCE,DCE,T12 DCE,TCE\VC	5/50		1	13	ok
2A	200815	JD3162-1MSD	8	10x	MS41135	V8260PCE,DCE,T12 DCE,TCE\VC	5/50		1	14	ok
2A	200816	IB		NA			5			15	ok
2A	200817	JD3305-2	1	NA	MS41192	V8260SL	5		1	16	ok
2A	200818	JD3138-3	4	50x	MS41119	V8260RCP	1/50		1	17	ok
											3:40 pm

GCMS Volatile Run Log

Standard / Reagents				Lot #		Column			
Standards	ABK: V019-2688-99.39	EC: V019-2688-111.11		Acrolein: V019-2688-105.29		Method		Rxi-624(30mx0.25mmx1.4um)	V8260C
Standard Concentration	100-10,000ppm	100ppm		100ppm		Init Calib Date			11/20/19
Expiration Date	12/12/19	11/26/19		12/14/19					
Internal Surrogate	V019-2688-109			ACE 3rd Source V019-2688-117	2-Butanone 3rd Source V019-2688-78				11/20/2019
Internal Surrogate Concentration	50/500ppm			400 ppm	400 ppm	Analysis Date			
Expiration Date	12/15/2019			12/21/19		Sequence loaded by			Robert Szot
Standards	Ext ABK: V019-2688-87.6	EC: V019-2688-103.7		Acrolein: V019-2688-88.4	Ext PA: V019-2688-100.1	Data processed by			Bridget Kelly
Standard Concentration	100-10,000ppm	100ppm		100ppm	100/1000 ppm	Batch ID			VL9325
Expiration Date	12/4/19	11/21/19		12/4/19	12/12/19	Matrix			AQ
pH Paper Lot#	217518	Initial Calibration Method		MLS325		Approved By:			KANYAV
						Approved Date:			11/23/2019 5:56:32 PM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH #	ALS #	Status	Comments
L 317672	BFB	NA				5			1	ok	3:51 pm
L 317673	IC9325-0.2	NA			8260 initial calibration	5			2	ok	1 uL ABK, EC, Acrolein / 500 mL DI H2O
L 317674	IC9325-0.5	NA			8260 initial calibration	5			3	ok	2.5 uL ABK, EC, Acrolein / 500 mL DI H2O
L 317675	IC9325-1	NA			8260 initial calibration	5			4	ok	5 uL ABK, EC, Acrolein / 500 mL DI H2O
L 317676	IC9325-2	NA			8260 initial calibration	5			5	ok	4 uL ABK, EC, Acrolein / 200 mL DI H2O
L 317677	IC9325-4	NA			8260 initial calibration	5			6	ok	2 uL ABK, EC, Acrolein / 50 mL DI H2O
L 317678	IC9325-8	NA			8260 initial calibration	5			7	ok	4 uL ABK, EC, Acrolein / 50 mL DI H2O
L 317679	IC9325-20	NA			8260 initial calibration	5			8	ok	10 uL ABK, EC, Acrolein / 50 mL DI H2O
L 317680	IC9325-50	NA			8260 initial calibration	5			9	ok	25 uL ABK, EC, Acrolein / 50 mL DI H2O
L 317681	IC9325-100	NA			8260 initial calibration	5			10	ok	50 uL ABK, EC, Acrolein / 50 mL DI H2O
L 317682	IC9325-200	NA			8260 initial calibration	5			11	ok	100 uL ABK, EC, Acrolein / 50 mL DI H2O

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Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
L 317683	IB	NA			5			12	ok	
L 317684	IB	NA			5			13	ok	
L 317685	ICV9325-50	NA	8260 initial calibration	5				14	ok	25 uL Ext ABK, Ext EC, Ext Acrolein / 50 mL DI H2O
L 317686	ICV9325-50	NA	8260 initial calibration	5				15	ok	25 uL Ext PA / 50 mL DI H2O
L 317687	IB	NA			5			1	ok	
L 317688	IB	NA			5			2	ok	
L 317689	IB	NA			5			3	ok	area high
L 317690	IB	NA			5			4	ok	area high
L 317691	IB	NA			5			5	ok	area high
L 317692	IB	NA			5			6	ok	area high
L 317693	IB	NA			5			7	ok	area high
L 317694	BFB2	NA			5			8	ok	
L 317695	ICV9325-50	NA			5			9	ok	50 uL 3rd Source Ace 3rd Source 20-butanone / 100 mL

GCMS Volatile Run Log

Standard / Reagents				Lot #							
Standards	ABK: V019-2692-77-9	EC: V019-2692-89-1		Acrolein: V019-2692-88-32		Method		Rxi-624(30mx0.25mmx1.4um)		v8260c	
Standard Concentration	100-10,000ppm	100ppm		100ppm		Init Calib Date				11/20/2019	
Expiration Date	3/4/2020	2/17/2020		3/11/2020							
Internal Surrogate	V019-2692-84					Analysis Date		2/18/2020			
Internal Surrogate Concentration	50/500ppm					Sequence loaded by		Edward Dumer			
Expiration Date	03/04/2020					Data processed by		kristely			
						Batch ID		V19424			
						Matrix		AQ			
Initial Calibration Method	ML9325					Approved By:		MEI			
pH Paper Lot#	217518					Approved Date:		2/19/2020 10:00:33 AM			

Data File	Sample ID	Bot #	Dil #	Workgroup #	Test	Purge Vol (ml)	CL	pH #	ALS #	Status	Comments
L 319836	IB		NA			5		1	ok		
L 319837	BFBCC9325-20		NA			5		2	ok\ok	20ul abk,ec.acrolein/100ml, 6:51am, BFB passed ave 8.297.8.309	
L 319838	BS		NA			5		3	ok	50ul abk,ec.acrolein/100ml	
L 319839	IB		NA			5		4	ok		
L 319840	MB		NA			5		5	ok		
L 319841	JD3305-10	1	NA	MS41192	V8260SL	5		1	6	ok	
L 319842	JD3246-4	4	NA	MS41177	V8260BTXMT	5		1	7	ok	
L 319843	JD3246-1	4	NA	MS41177	V8260BTXMT	5		1	8	ok	
L 319844	JD3246-3	4	5	MS41177	V8260BTXMT	10/50		1	9	ok	
L 319845	JD3305-10MS	2	NA	MS41192	V8260SL	5		1	10	ok	20ul abk,ec.acrolein/40ml
L 319846	JD3305-10MSD	4	NA	MS41192	V8260SL	5		1	11	ok	20ul abk,ec.acrolein/40ml

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	#	ALS Status	Comments
L 319847	IB		NA			5			12	ok	
L 319848	JD3305-12	1	NA	MS41192	V8260SL	5		1	13	ok	
L 319849	JD3305-1	2	NA	MS41192	V8260SL	5		1	14	ok	
L 319850	JD3305-3	1	NA	MS41192	V8260SL	5		1	15	ok	
L 319851	JD3305-4	1	NA	MS41192	V8260SL	5		1	16	ok	
L 319852	JD3305-5	1	NA	MS41192	V8260SL	5		1	17	ok	
L 319853	JD3305-6	1	NA	MS41192	V8260SL	5		1	18	ok	
L 319854	JD3305-7	2	NA	MS41192	V8260SL	5		1	19	ok	
L 319855	JD3305-8	1	NA	MS41192	V8260SL	5		1	20	ok	
L 319856	JD3305-9	1	NA	MS41192	V8260SL	5		1	21	ok	
L 319857	JD3305-11	1	NA	MS41192	V8260SL	5		1	22	ok	
L 319858	JD3246-8	4	NA	MS41177	V8260BTXMT	5		1	23	ok	
L 319859	JD3305-2	2	5	MS41192	V8260SL	10/50		1	24	rr	rr 1x o/d
L 319860	JD3246-12	3	20	MS41177	V8260BTXMT	2.5/50		1	25	ok	
L 319861	JD3246-13	3	20	MS41177	V8260BTXMT	2.5/50		1	26	rr	rr 1x o/d
L 319862	JD3246-14	3	25	MS41177	V8260BTXMT	2/50		1	27	rr	6:20pm; rr 2.5x o/d

Appendix B

First Quarter 2020 Effluent Air Laboratory Analytical Reports

1/30/2020

Mr. Peter Hollatz
AECOM Environment
4320 Winfield Road

Warrenville IL 60555

Project Name: UTC-SER 9/10

Project #: 60595520
Workorder #: 2001458

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 1/22/2020 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

WORK ORDER #: 2001458

Work Order Summary

CLIENT: Mr. Peter Hollatz
 AECOM Environment
 4320 Winfield Road
 Warrenville, IL 60555

BILL TO: Accounts Payable Austin
 AECOM
 PO Box 203970
 Austin, TX 78720

PHONE: 630 829-2736 **P.O. #:** 109672

FAX: 630-657-6305

PROJECT #: 60595520 UTC-SER 9/10

DATE RECEIVED: 01/22/2020

CONTACT: Ausha Scott

DATE COMPLETED: 01/30/2020

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	P1SVE-EFFC1-012120	Modified TO-14A	6.3 "Hg	15 psi
01AA	P1SVE-EFFC1-012120 Lab Duplicate	Modified TO-14A	6.3 "Hg	15 psi
02A	P2SVE-EFFC4-012120	Modified TO-14A	7.8 "Hg	16 psi
03A	P2SVE-EFFC5-012120	Modified TO-14A	7.8 "Hg	15.9 psi
04A	P1SVE-EFFC2-012120	Modified TO-14A	6.9 "Hg	16 psi
05A	P1SVE-EFFC3-012120	Modified TO-14A	6.5 "Hg	15 psi
06A	Lab Blank	Modified TO-14A	NA	NA
07A	CCV	Modified TO-14A	NA	NA
08A	LCS	Modified TO-14A	NA	NA
08AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:



DATE: 01/30/20

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-011, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE
Modified TO-14A
AECOM Environment
Workorder# 2001458**

Five 1 Liter Summa Canister samples were received on January 22, 2020. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

Requirement	TO-14A	ATL Modifications
Initial Calibration criteria	RSD</=30%	Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40% RSD.
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%.
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Sample Drying System	Nafion Dryer	Multibed hydrophobic sorbent
BFB ion abundance criteria	Ion abundance listed in Table 4 of TO-14A	Follow ion abundance criteria listed in Method TO-15

Receiving Notes

The Chain of Custody was missing method information. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

The data contained in this report have been generated in accordance with the requirements in the United Technologies Corporation Environmental Laboratory Program CHEM_03: Analytical Minimum Standards for Laboratories, September 2016 Revision 8.0 and associated documents if applicable.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC1-012120

Lab ID#: 2001458-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	13	43	30	100
1,1-Dichloroethane	1.3	3.7	5.2	15
1,1,1-Trichloroethane	1.3	50	7.0	270
Benzene	1.3	28	4.1	88
Trichloroethene	1.3	1.7	6.9	9.0
Toluene	1.3	75	4.8	280
Tetrachloroethene	1.3	16	8.7	110
Ethyl Benzene	1.3	9.4	5.6	41
m,p-Xylene	1.3	25	5.6	110
o-Xylene	1.3	7.8	5.6	34

Client Sample ID: P1SVE-EFFC1-012120 Lab Duplicate

Lab ID#: 2001458-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	13	46	30	110
1,1-Dichloroethane	1.3	3.8	5.2	15
1,1,1-Trichloroethane	1.3	50	7.0	270
Benzene	1.3	27	4.1	87
Trichloroethene	1.3	1.6	6.9	8.9
Toluene	1.3	76	4.8	290
Tetrachloroethene	1.3	16	8.7	110
Ethyl Benzene	1.3	10	5.6	44
m,p-Xylene	1.3	25	5.6	110
o-Xylene	1.3	7.7	5.6	34

Client Sample ID: P2SVE-EFFC4-012120

Lab ID#: 2001458-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	14	15	33	35
1,1,1-Trichloroethane	1.4	8.2	7.7	45
Benzene	1.4	14	4.5	43



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P2SVE-EFFC4-012120

Lab ID#: 2001458-02A

Toluene	1.4	50	5.3	190
Tetrachloroethene	1.4	6.5	9.6	44
Ethyl Benzene	1.4	9.2	6.1	40
m,p-Xylene	1.4	20	6.1	87
o-Xylene	1.4	7.4	6.1	32

Client Sample ID: P2SVE-EFFC5-012120

Lab ID#: 2001458-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	25	7.7	140
Tetrachloroethene	1.4	1.6	9.5	11

Client Sample ID: P1SVE-EFFC2-012120

Lab ID#: 2001458-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.4	1.8	5.4	7.2
1,1-Dichloroethane	1.4	48	5.5	190
cis-1,2-Dichloroethene	1.4	1.7	5.4	6.9
1,1,1-Trichloroethane	1.4	130	7.4	690
Trichloroethene	1.4	2.2	7.3	12
Tetrachloroethene	1.4	7.7	9.2	52

Client Sample ID: P1SVE-EFFC3-012120

Lab ID#: 2001458-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	5.5	5.2	22
cis-1,2-Dichloroethene	1.3	2.1	5.1	8.2
1,1,1-Trichloroethane	1.3	160	7.0	890
Trichloroethene	1.3	5.3	6.9	29
Tetrachloroethene	1.3	6.8	8.8	46



Air Toxics

Client Sample ID: P1SVE-EFFC1-012120

Lab ID#: 2001458-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012508	Date of Collection:	1/21/20 9:40:00 AM	
Dil. Factor:	2.56	Date of Analysis:	1/25/20 02:35 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.1	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	43	30	100
Methylene Chloride	13	Not Detected	44	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	3.7	5.2	15
2-Butanone (Methyl Ethyl Ketone)	5.1	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	50	7.0	270
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
Benzene	1.3	28	4.1	88
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	1.7	6.9	9.0
Toluene	1.3	75	4.8	280
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	16	8.7	110
Ethyl Benzene	1.3	9.4	5.6	41
m,p-Xylene	1.3	25	5.6	110
o-Xylene	1.3	7.8	5.6	34

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC1-012120 Lab Duplicate

Lab ID#: 2001458-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012509	Date of Collection:	1/21/20 9:40:00 AM	
Dil. Factor:	2.56	Date of Analysis:	1/25/20 03:01 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.1	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	46	30	110
Methylene Chloride	13	Not Detected	44	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	3.8	5.2	15
2-Butanone (Methyl Ethyl Ketone)	5.1	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	50	7.0	270
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
Benzene	1.3	27	4.1	87
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	1.6	6.9	8.9
Toluene	1.3	76	4.8	290
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	16	8.7	110
Ethyl Benzene	1.3	10	5.6	44
m,p-Xylene	1.3	25	5.6	110
o-Xylene	1.3	7.7	5.6	34

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC4-012120

Lab ID#: 2001458-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012510	Date of Collection:	1/21/20 10:05:00 AM	
Dil. Factor:	2.82	Date of Analysis:	1/25/20 03:28 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.6	Not Detected
Chloroethane	5.6	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.6	Not Detected
Acetone	14	15	33	35
Methylene Chloride	14	Not Detected	49	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.6	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.6	Not Detected	17	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.6	Not Detected
Chloroform	1.4	Not Detected	6.9	Not Detected
1,1,1-Trichloroethane	1.4	8.2	7.7	45
Carbon Tetrachloride	1.4	Not Detected	8.9	Not Detected
Benzene	1.4	14	4.5	43
1,2-Dichloroethane	1.4	Not Detected	5.7	Not Detected
Trichloroethene	1.4	Not Detected	7.6	Not Detected
Toluene	1.4	50	5.3	190
1,1,2-Trichloroethane	1.4	Not Detected	7.7	Not Detected
Tetrachloroethene	1.4	6.5	9.6	44
Ethyl Benzene	1.4	9.2	6.1	40
m,p-Xylene	1.4	20	6.1	87
o-Xylene	1.4	7.4	6.1	32

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC5-012120

Lab ID#: 2001458-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012511	Date of Collection:	1/21/20 10:10:00 AM	
Dil. Factor:	2.81	Date of Analysis:	1/25/20 03:54 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.6	Not Detected
Chloroethane	5.6	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.6	Not Detected
Acetone	14	Not Detected	33	Not Detected
Methylene Chloride	14	Not Detected	49	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.6	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.6	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.6	Not Detected
Chloroform	1.4	Not Detected	6.9	Not Detected
1,1,1-Trichloroethane	1.4	25	7.7	140
Carbon Tetrachloride	1.4	Not Detected	8.8	Not Detected
Benzene	1.4	Not Detected	4.5	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.7	Not Detected
Trichloroethene	1.4	Not Detected	7.6	Not Detected
Toluene	1.4	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.7	Not Detected
Tetrachloroethene	1.4	1.6	9.5	11
Ethyl Benzene	1.4	Not Detected	6.1	Not Detected
m,p-Xylene	1.4	Not Detected	6.1	Not Detected
o-Xylene	1.4	Not Detected	6.1	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC2-012120

Lab ID#: 2001458-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012512	Date of Collection:	1/21/20 10:15:00 AM	
Dil. Factor:	2.71	Date of Analysis:	1/25/20 04:21 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.5	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.4	1.8	5.4	7.2
Acetone	14	Not Detected	32	Not Detected
Methylene Chloride	14	Not Detected	47	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.4	Not Detected
1,1-Dichloroethane	1.4	48	5.5	190
2-Butanone (Methyl Ethyl Ketone)	5.4	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.4	1.7	5.4	6.9
Chloroform	1.4	Not Detected	6.6	Not Detected
1,1,1-Trichloroethane	1.4	130	7.4	690
Carbon Tetrachloride	1.4	Not Detected	8.5	Not Detected
Benzene	1.4	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.5	Not Detected
Trichloroethene	1.4	2.2	7.3	12
Toluene	1.4	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.4	Not Detected
Tetrachloroethene	1.4	7.7	9.2	52
Ethyl Benzene	1.4	Not Detected	5.9	Not Detected
m,p-Xylene	1.4	Not Detected	5.9	Not Detected
o-Xylene	1.4	Not Detected	5.9	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC3-012120

Lab ID#: 2001458-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012513	Date of Collection:	1/21/20 10:35:00 AM	
Dil. Factor:	2.58	Date of Analysis:	1/25/20 04:48 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	5.5	5.2	22
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	2.1	5.1	8.2
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	160	7.0	890
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	5.3	6.9	29
Toluene	1.3	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	6.8	8.8	46
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2001458-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012507a	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	1/25/20 01:40 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2001458-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012502	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/25/20 10:14 AM

Compound	%Recovery
Vinyl Chloride	90
Chloroethane	89
1,1-Dichloroethene	102
Acetone	94
Methylene Chloride	90
trans-1,2-Dichloroethene	103
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	104
Chloroform	101
1,1,1-Trichloroethane	98
Carbon Tetrachloride	100
Benzene	96
1,2-Dichloroethane	98
Trichloroethene	101
Toluene	96
1,1,2-Trichloroethane	103
Tetrachloroethene	98
Ethyl Benzene	101
m,p-Xylene	101
o-Xylene	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2001458-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012503	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/25/20 10:44 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	89	70-130
Chloroethane	92	70-130
1,1-Dichloroethene	99	70-130
Acetone	86	70-130
Methylene Chloride	88	70-130
trans-1,2-Dichloroethene	110	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	89	70-130
cis-1,2-Dichloroethene	92	70-130
Chloroform	94	70-130
1,1,1-Trichloroethane	94	70-130
Carbon Tetrachloride	96	70-130
Benzene	92	70-130
1,2-Dichloroethane	92	70-130
Trichloroethene	103	70-130
Toluene	93	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	95	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	96	70-130
o-Xylene	96	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2001458-08AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	a012504	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/25/20 11:09 AM
Compound	%Recovery	Method	Limits
Vinyl Chloride	92	70-130	
Chloroethane	90	70-130	
1,1-Dichloroethene	99	70-130	
Acetone	92	70-130	
Methylene Chloride	89	70-130	
trans-1,2-Dichloroethene	109	70-130	
1,1-Dichloroethane	91	70-130	
2-Butanone (Methyl Ethyl Ketone)	90	70-130	
cis-1,2-Dichloroethene	97	70-130	
Chloroform	98	70-130	
1,1,1-Trichloroethane	98	70-130	
Carbon Tetrachloride	99	70-130	
Benzene	93	70-130	
1,2-Dichloroethane	92	70-130	
Trichloroethene	105	70-130	
Toluene	93	70-130	
1,1,2-Trichloroethane	102	70-130	
Tetrachloroethene	97	70-130	
Ethyl Benzene	102	70-130	
m,p-Xylene	100	70-130	
o-Xylene	98	70-130	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
1,2-Dichloroethane-d4	95	70-130	
Toluene-d8	98	70-130	
4-Bromofluorobenzene	99	70-130	

4/3/2020

Mr. Peter Hollatz
AECOM Environment
4320 Winfield Road

Warrenville IL 60555

Project Name: UTC-ITS-Plant 1

Project #: 60627752
Workorder #: 2003649

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 3/24/2020 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

WORK ORDER #: 2003649

Work Order Summary

CLIENT: Mr. Peter Hollatz
 AECOM Environment
 4320 Winfield Road
 Warrenville, IL 60555

BILL TO: Accounts Payable Austin
 AECOM
 PO Box 203970
 Austin, TX 78720

PHONE: 630 829-2736 **P.O. #** 109672
FAX: 630-657-6305 **PROJECT #** 60627752 UTC-ITS-Plant 1
DATE RECEIVED: 03/24/2020 **CONTACT:** Ausha Scott
DATE COMPLETED: 04/03/2020

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	P1SVE-EFFC3-032020	Modified TO-14A	6.5 "Hg	15 psi
01AA	P1SVE-EFFC3-032020 Lab Duplicate	Modified TO-14A	6.5 "Hg	15 psi
02A	P1SVE-EFFC1-032020	Modified TO-14A	7.5 "Hg	15 psi
03A	P1SVE-EFFC2-032020	Modified TO-14A	7.5 "Hg	15 psi
04A	P2SVE-EFFC4-032020	Modified TO-14A	9.0 "Hg	15 psi
05A	P2SVE-EFFC5-032020	Modified TO-14A	7.0 "Hg	15 psi
06A	Lab Blank	Modified TO-14A	NA	NA
07A	CCV	Modified TO-14A	NA	NA
08A	LCS	Modified TO-14A	NA	NA
08AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:



DATE: 04/03/20

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP – CA009332019-11, VA NELAP - 460197, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-011, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

**LABORATORY NARRATIVE
EPA Method TO-15
AECOM Environment
Workorder# 2003649**

Five 1 Liter Summa Canister samples were received on March 24, 2020. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The data contained in this report have been generated in accordance with the requirements in the United Technologies Corporation Environmental Laboratory Program CHEM_03: Analytical Minimum Standards for Laboratories, September 2016 Revision 8.0 and associated documents if applicable.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC3-032020

Lab ID#: 2003649-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	3.4	5.2	14
cis-1,2-Dichloroethene	1.3	1.8	5.1	7.1
1,1,1-Trichloroethane	1.3	43	7.0	240
Trichloroethene	1.3	6.4	6.9	35
Tetrachloroethene	1.3	3.2	8.8	22

Client Sample ID: P1SVE-EFFC3-032020 Lab Duplicate

Lab ID#: 2003649-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	3.6	5.2	15
cis-1,2-Dichloroethene	1.3	1.7	5.1	6.7
1,1,1-Trichloroethane	1.3	44	7.0	240
Trichloroethene	1.3	6.0	6.9	32
Tetrachloroethene	1.3	3.4	8.8	23

Client Sample ID: P1SVE-EFFC1-032020

Lab ID#: 2003649-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.3	1.9	5.3	7.4
1,1-Dichloroethane	1.3	5.9	5.4	24
cis-1,2-Dichloroethene	1.3	1.4	5.3	5.6
1,1,1-Trichloroethane	1.3	36	7.3	200
Trichloroethene	1.3	4.8	7.2	26
Tetrachloroethene	1.3	13	9.1	88

Client Sample ID: P1SVE-EFFC2-032020

Lab ID#: 2003649-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	5.3	5.4	21



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC2-032020**Lab ID#: 2003649-03A**

cis-1,2-Dichloroethene	1.3	2.6	5.3	10
1,1,1-Trichloroethane	1.3	29	7.3	160
Trichloroethene	1.3	19	7.2	100
Tetrachloroethene	1.3	6.3	9.1	42

Client Sample ID: P2SVE-EFFC4-032020**Lab ID#: 2003649-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	1.4	24	7.9	130
Tetrachloroethene	1.4	6.4	9.8	43

Client Sample ID: P2SVE-EFFC5-032020**Lab ID#: 2003649-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.3	1.5	5.2	5.9
Acetone	13	15	31	36
1,1-Dichloroethane	1.3	7.1	5.3	29
cis-1,2-Dichloroethene	1.3	2.1	5.2	8.2
1,1,1-Trichloroethane	1.3	230	7.2	1200
Trichloroethene	1.3	3.2	7.1	17
Tetrachloroethene	1.3	12	9.0	79



Air Toxics

Client Sample ID: P1SVE-EFFC3-032020

Lab ID#: 2003649-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032710	Date of Collection:	3/20/20 11:00:00 AM	
Dil. Factor:	2.58	Date of Analysis:	3/27/20 03:18 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	3.4	5.2	14
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	1.8	5.1	7.1
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	43	7.0	240
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	6.4	6.9	35
Toluene	1.3	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	3.2	8.8	22
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC3-032020 Lab Duplicate

Lab ID#: 2003649-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032711	Date of Collection:	3/20/20 11:00:00 AM	
Dil. Factor:	2.58	Date of Analysis:	3/27/20 03:45 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	3.6	5.2	15
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	1.7	5.1	6.7
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	44	7.0	240
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	6.0	6.9	32
Toluene	1.3	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	3.4	8.8	23
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC1-032020

Lab ID#: 2003649-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032712	Date of Collection:	3/20/20 11:15:00 AM	
Dil. Factor:	2.69	Date of Analysis:	3/27/20 04:11 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	1.9	5.3	7.4
Acetone	13	Not Detected	32	Not Detected
Methylene Chloride	13	Not Detected	47	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
1,1-Dichloroethane	1.3	5.9	5.4	24
2-Butanone (Methyl Ethyl Ketone)	5.4	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	1.4	5.3	5.6
Chloroform	1.3	Not Detected	6.6	Not Detected
1,1,1-Trichloroethane	1.3	36	7.3	200
Carbon Tetrachloride	1.3	Not Detected	8.5	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	4.8	7.2	26
Toluene	1.3	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	13	9.1	88
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC2-032020

Lab ID#: 2003649-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032713	Date of Collection:	3/20/20 11:55:00 AM	
Dil. Factor:	2.69	Date of Analysis:	3/27/20 04:37 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.4	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Acetone	13	Not Detected	32	Not Detected
Methylene Chloride	13	Not Detected	47	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
1,1-Dichloroethane	1.3	5.3	5.4	21
2-Butanone (Methyl Ethyl Ketone)	5.4	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	2.6	5.3	10
Chloroform	1.3	Not Detected	6.6	Not Detected
1,1,1-Trichloroethane	1.3	29	7.3	160
Carbon Tetrachloride	1.3	Not Detected	8.5	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	19	7.2	100
Toluene	1.3	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	6.3	9.1	42
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC4-032020

Lab ID#: 2003649-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032714	Date of Collection:	3/20/20 12:05:00 PM	
Dil. Factor:	2.89	Date of Analysis:	3/27/20 05:04 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.4	Not Detected	3.7	Not Detected
Chloroethane	5.8	Not Detected	15	Not Detected
1,1-Dichloroethene	1.4	Not Detected	5.7	Not Detected
Acetone	14	Not Detected	34	Not Detected
Methylene Chloride	14	Not Detected	50	Not Detected
trans-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected
1,1-Dichloroethane	1.4	Not Detected	5.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.8	Not Detected	17	Not Detected
cis-1,2-Dichloroethene	1.4	Not Detected	5.7	Not Detected
Chloroform	1.4	Not Detected	7.0	Not Detected
1,1,1-Trichloroethane	1.4	24	7.9	130
Carbon Tetrachloride	1.4	Not Detected	9.1	Not Detected
Benzene	1.4	Not Detected	4.6	Not Detected
1,2-Dichloroethane	1.4	Not Detected	5.8	Not Detected
Trichloroethene	1.4	Not Detected	7.8	Not Detected
Toluene	1.4	Not Detected	5.4	Not Detected
1,1,2-Trichloroethane	1.4	Not Detected	7.9	Not Detected
Tetrachloroethene	1.4	6.4	9.8	43
Ethyl Benzene	1.4	Not Detected	6.3	Not Detected
m,p-Xylene	1.4	Not Detected	6.3	Not Detected
o-Xylene	1.4	Not Detected	6.3	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC5-032020

Lab ID#: 2003649-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032715	Date of Collection:	3/20/20 12:10:00 PM	
Dil. Factor:	2.64	Date of Analysis:	3/27/20 05:30 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
Chloroethane	5.3	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	1.5	5.2	5.9
Acetone	13	15	31	36
Methylene Chloride	13	Not Detected	46	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
1,1-Dichloroethane	1.3	7.1	5.3	29
2-Butanone (Methyl Ethyl Ketone)	5.3	Not Detected	16	Not Detected
cis-1,2-Dichloroethene	1.3	2.1	5.2	8.2
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	230	7.2	1200
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Trichloroethene	1.3	3.2	7.1	17
Toluene	1.3	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	12	9.0	79
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	Not Detected	5.7	Not Detected
o-Xylene	1.3	Not Detected	5.7	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2003649-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032705a	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	3/27/20 12:33 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2003649-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/27/20 11:04 AM

Compound	%Recovery
Vinyl Chloride	88
Chloroethane	80
1,1-Dichloroethene	85
Acetone	90
Methylene Chloride	101
trans-1,2-Dichloroethene	88
1,1-Dichloroethane	90
2-Butanone (Methyl Ethyl Ketone)	80
cis-1,2-Dichloroethene	88
Chloroform	99
1,1,1-Trichloroethane	110
Carbon Tetrachloride	127
Benzene	83
1,2-Dichloroethane	116
Trichloroethene	100
Toluene	88
1,1,2-Trichloroethane	93
Tetrachloroethene	105
Ethyl Benzene	96
m,p-Xylene	99
o-Xylene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2003649-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032703	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/20 11:28 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	86	70-130
Chloroethane	76	70-130
1,1-Dichloroethene	81	70-130
Acetone	87	70-130
Methylene Chloride	94	70-130
trans-1,2-Dichloroethene	75	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	74	70-130
cis-1,2-Dichloroethene	92	70-130
Chloroform	94	70-130
1,1,1-Trichloroethane	102	70-130
Carbon Tetrachloride	113	70-130
Benzene	81	70-130
1,2-Dichloroethane	111	70-130
Trichloroethene	95	70-130
Toluene	85	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	101	70-130
Ethyl Benzene	91	70-130
m,p-Xylene	94	70-130
o-Xylene	93	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2003649-08AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	3032704	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	3/27/20 11:53 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	87	70-130
Chloroethane	74	70-130
1,1-Dichloroethene	82	70-130
Acetone	87	70-130
Methylene Chloride	95	70-130
trans-1,2-Dichloroethene	76	70-130
1,1-Dichloroethane	87	70-130
2-Butanone (Methyl Ethyl Ketone)	75	70-130
cis-1,2-Dichloroethene	93	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	102	70-130
Carbon Tetrachloride	111	70-130
Benzene	79	70-130
1,2-Dichloroethane	110	70-130
Trichloroethene	94	70-130
Toluene	84	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	100	70-130
Ethyl Benzene	91	70-130
m,p-Xylene	93	70-130
o-Xylene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

Appendix C

First Quarter 2020 Phase1/Phase 2 AS/SVE System Operations Data Sheets

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

2020

DATE	3-17-20	3-18-20	3-19-20	3-20-20						
TIME	2:38pm	2:17pm	2:15pm	1025						
OBSERVER'S INITIALS	MG	MG	MG	A.1t						
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA						
Non-critical Alarm Code	NA	NA	NA	NA						
HOURS METERS										
B-701 SVE (hrs)	58416	58440	58464	58484						
C-2201 SPRG (hrs)	51995	52018	52043	52063						
F-2501 H-XCH (hrs)	51995	52018	52043	52063						
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27						
PT-701 SVE (-wc)	-54.4	-81.6	-81.6	-81.6						
PT-2501 SPRG (psi)	13.1	13.5	13.6	13.7						
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0						
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0						
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60						
SVON-102 SVE (min)	60	60	60	60						
SVON-103 SVE (min)	180	180	180	180						
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60						
SVON-2802 SPRG (min)	60	60	60	60						
SVON-2803 SPRG (min)	180	180	180	180						
SPRG DELAY (min)	0	0	0	0						
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30						

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

2020

DATE	03-07-20	3-8-20	3-9-20	3-10-20	3-11-20	3-12-20	3-13-20	3-14-20	3-15-20	3-16-20
TIME	10:47 AM	7:40 AM	1:10 pm	2:17 pm	12:45 PM	11:00 AM	12:31 pm	8:25 AM	10:33 AM	1:18 pm
OBSERVER'S INITIALS	MG	DE	MG	MG	KA	MG	MG	KA	MG	MG

ALARMS

HOURS METERS

B-701 SVE (hrs)	58174	58194	58223	58248	58271	58293	58318	58338	58364	58391
C-2201 SPRG (hrs)	51750	51770	51799	51825	51847	51870	51896	51916	51942	51969
F-2501 H-XCH (hrs)	51750	51770	51799	51825	51847	51870	51896	51916	51942	51969

ANALOGS

MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	-54.4	54.4	-54.4	-40.8	-81.6	-40.8	-40.8	-54.4	-81.6	-54.4	
PT-2501 SPRG (psi)	13.1	13.1	13.1	14.3	13.7	13.8	13.6	13.5	13.6	13.2	

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30

DAILY DOCUMENTATION SHEET

2020

DATE	02.26.20	02.27.20	02.28.20	02.29.20	3-1-20	3.2.20	3.3.20	3.4.20	3.5.20	3.6.20
TIME	01:59 pm	1:00 pm	2:30 pm	12:31 pm	9:54 AM	12:56 pm	9:16 AM	12:58 pm	12:58 pm	12:55 pm
OBSERVER'S INITIALS	MG	MG	MG	MG	KA	MG	MG	MG	MG	MG

ALARMS

HOURS METERS

B-701 SVE (hrs)	57937	57960	57986	58008	58029	58056	58077	58104	58128	58152
C-2201 SPRG (hrs)	51511	51534	51560	51582	51604	51631	51651	51679	51703	51728
F-2501 H-XCH (hrs)	51511	51534	51560	51582	51604	51631	51651	51679	51703	51728

ANALOGS

MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	-81.6	-54.4	-54.4	-81.6	-81.6	-81.6	-81.6	-54.4	-81.6	-81.6
PT-2501 SPRG (psi)	14.4	13.3	14.3	13.6	13.5	14.4	13.7	13.1	13.6	13.6

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

2020

DATE	2-16-20	2-17-20	2-18-20	2-19-20	2-20-20	2-21-20	2-22-20	2-23-20	2-24-20	2-25-20
TIME	9:36 AM	2:17 PM	1:07pm	1:53pm	2:31pm	10:59 AM	10:12AM	7:58 AM	8:22 AM	0800
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	MG	KA	DE	MG	71+

ALARMS

HOURS METERS

B-701 SVE (hrs)	57694	57722	57745	5778	57794	57815	57838	57860	57884	57908
C-2201 SPRG (hrs)	51264	51293	51316	51341	51366	51387	51410	51432	51457	51481
F-2501 H-XCH (hrs)	51264	51293	51316	51341	51366	51387	51410	51432	51457	51481

ANALOGS

MV-701 SVE POS (%)	27%	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	54.4	-81.6	-81.6	-81.6	-81.6	-81.6	-54.4	-81.6	-81.6	-81.6	-54.4
PT-2501 SPRG (psi)	13.2	13.6	13.8	13.9	13.9	13.7	13.7	13.7	13.7	13.7	13.6

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30 30

2020

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	2-3-20	2-4-20	2-5-20	2-6-20	2-7-20	2-8-20	2-9-20	2-10-20	2-14-20	2-15-20
TIME	2:34 PM	0930	1:43 PM	1:38 PM	12:46 PM	12:17 PM	8:35 AM	0800	1200	11:20 AM
OBSERVER'S INITIALS	MG	AJ	DE	MG	MG	MG	DE	AJ	RJ	MG

ALARMS

HOURS METERS

B-701 SVE (hrs)	57487	57506	57534	57558	57581	57605	57625	57648	57648	57671
C-2201 SPRG (hrs)	51056	51075	51103	51128	51151	51175	51195	51219	51219	51242
F-2501 H-XCH (hrs)	51056	51075	51103	51128	51151	51175	51195	51219	51219	51242

ANALOGS

MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	-81.6	-81.6	54.4	-54.4	-81.6	-81.6	81.6	54.4	54.4	-81.6	-81.6
PT-2501 SPRG (psi)	13.7	13.9	13.9	13.3	13.6	13.9	13.7	13.8	13.7	13.7	13.7

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30

2020

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	1-24-20	1-25-20	1-26-20	1-27-20	1-28-20	1-29-20	1-30-20	1-31-20	2-1-20	2-2-20
TIME	3:11 pm	10:06 AM	12:06 PM	10:30	2:28 pm	12:42 pm	2:06 pm	1:48 pm	10:07 AM	8:50 AM
OBSERVER'S INITIALS	MG	KA	MG	A.F	MG	MG	MG	MG	KA	DE

ALARMS

HOURS METERS

B-701 SVE (hrs)	57288	57307	57315	57315	57343	57365	57391	57414	57435	57457
C-2201 SPRG (hrs)	50855	50874	50882	50882	50911	50933	50959	50983	51003	51026
F-2501 H-XCH (hrs)	50855	50874	50882	50882	50911	50933	50959	50983	51003	51026

ANALOGS

MV-701 SVE POS (%)	27	27	27	27	27	27%	27	27	27	27	27
PT-701 SVE (-wc)	-81.6	-81.6	-0.0	-54.4	-81.6	-54.4	-54.4	-54.4	-54.4	-54.4	81.6
PT-2501 SPRG (psi)	13.8	13.9	0.0	13.7	13.9	13.3	13.8	13.4	13.3	13.3	13.8

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	12.3.19	12.4.19	12.5.19	12.6.19	12.7.19	12.8.19	12.9.19	1-11-20	1-22-20	1-22-20
TIME	2:20 pm	1:07 pm	9:20 AM	12:56 pm	6:55 AM	10:06 AM	10:55	09:15	12:53 PM	12:54 PM
OBSERVER'S INITIALS	MG	MG	MG	MG	QE	MG	AS	A.L	MG	MG

ALARMS

HOURS METERS

B-701 SVE (hrs)	57083	57090	57110	57138	57156	57183	57208	57211	57238	57262
C-2201 SPRG (hrs)	50648	50655	50675	50703	50721	50749	50774	50777	50804	50829
F-2501 H-XCH (hrs)	50648	50655	50675	50703	50721	50749	50774	50777	50804	50829

ANALOGS

MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	-54.4	-54.4	-54.4	-54.4	-54.4	-54.4	-54.4	54.4	-81.6	-81.6
PT-2501 SPRG (psi)	13.2	13.8	13.2	13.2	13.1	13.1	13.2	13.5	13.9	14.0

SET POINTS

SET POINTS 2

SET POINTS 3

SET POINTS 4

MV-701 SVE POS (%) 30 30 30 30 30 30 30 30 30 30 30

WEEKLY DOCUMENTATION SHEET
SYSTEM COMPONENTS

220

DATE	3.9.20	3.16.20						
TIME	1:14 pm	1:22 pm						
OBSERVER'S INITIALS	MG	MG						

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA						
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SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	5822.3	5839.1						
Inlet Vacuum (-wc)	-58	-59						
Pre-Filter Vacuum (-wc)	-44.2	-44.2						
Post-Filter Vacuum (-wc)	-51	-49						
Outlet Pressure (wc)	11.108 (M)	11.5						
Outlet Temperature (°F)	108	108						
Outlet Magnehelic* (in H ₂ O)	1.1	1.15						
Water Level Sight Glass (in)	1"	0						

AIR SPARGE (SPRG)

Hours Operation (hrs)	51800	51969						
Oil Sight Glass (half pt.)	OK	OK						

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	51800	51969						
Inlet Temperature (°F)	220	214						
Inlet Pressure (psi)	17.0	17.5						
Outlet Temperature (°F)	104	101						
Outlet Pressure (psi)	14.5	15						
Outlet Magnehelic* (in H ₂ O)	3.55	3.60						

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	286976287842							
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* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

2019 / 2020

WEEKLY DOCUMENTATION SHEET
SYSTEM COMPONENTS

DATE	12-2-19	12-9-19	1-21-20	1-27-20	2-3-20	2-10-20	2-17-20	2-24-20	3-2-20
TIME	1:11 PM	1055	0915	1030	2:36 PM	0806	2:19 PM	8:30 AM	12:58 PM
OBSERVER'S INITIALS	MG	AS	A.F.	A.I.K.	MG	A.I.H.	MG	MG	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	N/A	NA	NA	NA	NA	NA	PRE-FILTER VACUUM - ZEROED OUTLET (-80.9)	NA
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SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	57058	57208	57211	57315	57487	57648	57722	57884	58056
Inlet Vacuum (-wc)	-60	-58	-76	-60	-98	-56	-98	-99	-98
Pre-Filter Vacuum (-wc)	-45.1	-41.4	-55.6	-45.5	-80.4	-42.3	-81.0	-81.8 (MG)	-80.9
Post-Filter Vacuum (-wc)	-50	-49	-60	-50	-84	-47	-84	-85	-84
Outlet Pressure (wc)	11.5	11.0	10.0	11.0	6.0	12.0	6.0	6.0	6.0
Outlet Temperature (°F)	114	117	109	100	140	104	137	140	137
Outlet Magnehelic* (in H ₂ O)	1.1	1.1	1.2	1.2	0.85	1.2	0.90	0.90	0.90
Water Level Sight Glass (in)	10"	10	Ø	Ø	4"	9"	Ø	2"	2"

AIR SPARGE (SPRG)

Hours Operation (hrs)	50622	50774	50777	50882	51056	51219	51293	51457	51631
Oil Sight Glass (half pt.)	OK								

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	50622	50774	50777	50882	51056	51219	51293	51457	51631
Inlet Temperature (°F)	219	219	200	170	217	215	215	220	224
Inlet Pressure (psi)	17.0	17.0	19.0	22.0	17.5	18.5	18.0	18.0	17.75
Outlet Temperature (°F)	100	105	94	84	101	98	102	103	103
Outlet Pressure (psi)	15.0	15.0	16.5	16.5	15.25	15.50	15.25	15.25	15.50
Outlet Magnehelic* (in H ₂ O)	3.1	3.5	3.7	3.5	3.35	3.50	3.50	3.40	3.35

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	280836	281548	281753	282285	283156	283974	284375	285219	286117
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* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
SVE MANIFOLD

DATE	3-20-20								
TIME	10:25								
INITIALS	A.L.								

MAGNEHELIC GAUGE*

CELL 1	SVE-1 (in H ₂ O)	0.5							
	SVE-2 (in H ₂ O)	1.6							
CELL 2	SVE-3 (in H ₂ O)	0.7							
	SVE-4 (in H ₂ O)	1.4							
CELL 3	SVE-5 (in H ₂ O)	1.1							
	SVE-6 (in H ₂ O)	1.4							

VACUUM GAUGE

CELL 1	SVE-1 (-wc)	18							
	SVE-2 (-wc)	18							
CELL 2	SVE-3 (-wc)	12							
	SVE-4 (-wc)	10							
CELL 3	SVE-5 (-wc)	39							
	SVE-6 (-wc)	41							

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
SVE MANIFOLD

DATE	3-21-19	5-24-19	6/26/19	7-24-19	9-27-19	10-17-19	11-27-19	12/09/19	1-21-20	2-25-20
TIME	1200	0805	1100	1200	0930	1330	0925	1055	0945	0800
INITIALS	A.H.	A.H.	M.P.	A.H.	A.H.	A.H.	A.S.	A.L.	A.H.	

MAGNEHELIC GAUGE*

CELL 1	SVE-1 (in H ₂ O)	0.0	1.1	1.0	1.0	0.6	0.6	0.6	0.7	0.6	0.1
	SVE-2 (in H ₂ O)	1.5	1.4	1.4	1.4	0.7	0.7	0.6	0.8	0.8	0.9
CELL 2	SVE-3 (in H ₂ O)	1.8	1.3	1.4	1.4	0.7	0.7	0.7	0.06	0.06	0.8
	SVE-4 (in H ₂ O)	2.1	1.0	1.1	1.1	0.6	0.7	0.7	0.05	0.08	0.8
CELL 3	SVE-5 (in H ₂ O)	0.8	0.8	1.0	1.1	1.2	1.2	1.2	1.1	1.2	1.2
	SVE-6 (in H ₂ O)	0.8	0.2	0.8	1.0	1.0	0.9	1.0	0.9	0.9	0.9

VACUUM GAUGE

CELL 1	SVE-1 (-wc)	30	27	28	28	16	19	19	18	18	17
	SVE-2 (-wc)	30	25	25	25	18	17	16	17	17	16
CELL 2	SVE-3 (-wc)	26	20	20	20	12	12	12	16.5	12	12
	SVE-4 (-wc)	20	18	20	20	12	12	12	16.5	10	11
CELL 3	SVE-5 (-wc)	35	33	36	36	37	40	38	32	40	36
	SVE-6 (-wc)	40	37	36	37	39	40	40	32	43	41

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
AIR SPARGE MANIFOLD

DATE	8-20-20								
TIME	1685								
INITIALS	R.L.								

ROTOMETER

CELL 1	AS-1 (scfm)	17.0							
	AS-2 (scfm)	18.0							
	AS-3 (scfm)	17.0							
	AS-4 (scfm)	16.5							
	AS-5 (scfm)	17.0							
CELL 2	AS-6 (scfm)	20.0							
	AS-7 (scfm)	20.0							
	AS-8 (scfm)	17.0							
	AS-9 (scfm)	11.0							
	AS-10 (scfm)	18.0							
CELL 3	AS-11 (scfm)	22.0							
	AS-12 (scfm)	16.0							
	AS-13 (scfm)	15.0							
	AS-14 (scfm)	16.0							
	AS-15 (scfm)	16.0							

PRESSURE GAUGE

CELL 1	AS-1 (psi)	14.0							
	AS-2 (psi)	13.5							
	AS-3 (psi)	13.5							
	AS-4 (psi)	13.5							
	AS-5 (psi)	13.5							
CELL 2	AS-6 (psi)	13.0							
	AS-7 (psi)	13.0							
	AS-8 (psi)	13.0							
	AS-9 (psi)	13.5							
	AS-10 (psi)	13.0							
CELL 3	AS-11 (psi)	13.5							
	AS-12 (psi)	14.0							
	AS-13 (psi)	13.0							
	AS-14 (psi)	14.0							
	AS-15 (psi)	13.5							

MONTHLY DOCUMENTATION SHEET
AIR SPARGE MANIFOLD

DATE	3-21-19	5-24-19	6-26-19	7-29-19	9-27-19	10-18-19	11-27-19	12-09-19	1-21-20	2-25-20
TIME	1300	0805	1008	1300	0930	1330	0925	1110	0945	0800
INITIALS	A.H.	A.L.	NP	A.H.	A.H.	A.H.	A.H.	AS	A.H.	A.H.

ROTOMETER

CELL 1	AS-1 (scfm)	18.6	18.0	17.5	17.5	18.0	13.0	17.0	17.5	18.0	18.0
	AS-2 (scfm)	19.0	18.5	17.5	17.5	18.0	14.0	18.0	18.0	19.0	19.0
CELL 2	AS-3 (scfm)	19.0	18.0	18.0	18.0	18.0	12.0	18.0	17.5	18.0	18.0
	AS-4 (scfm)	17.0	17.0	16.0	16.0	17.0	10.5	16.0	17.0	17.0	17.0
CELL 3	AS-5 (scfm)	19.0	18.0	17.5	17.5	18.0	12.0	16.0	17.0	18.0	18.0
	AS-6 (scfm)	15.0	14.5	13.0	14.0	12.0	14.5	10.0	18.0	21.0	19.0
	AS-7 (scfm)	15.0	14.5	13.5	14.0	12.5	14.5	20.0	20.0	19.0	20.0
	AS-8 (scfm)	20.0	19.0	17.5	18.0	19.0	12.0	18.0	17.0	18.0	17.0
	AS-9 (scfm)	11.0	13.5	14.0	Boden	Boden	5.0	10.0	11.0	11.0	12.0
	AS-10 (scfm)	22.0	21.0	20.5	20.0	20.5	13.0	18.0	17.5	18.0	18.0
	AS-11 (scfm)	15.0	14.0	10.5	7.0	24.0	17.0	23.0	21.0	22.5	23.0
	AS-12 (scfm)	16.5	15.0	13.5	15.0	15.0	11.0	14.0	12.5	15.0	16.0
	AS-13 (scfm)	15.0	13.5	12.5	13.0	18.0	9.0	14.0	13.0	15.0	15.0
	AS-14 (scfm)	19.0	17.0	15.5	16.5	17.0	11.0	16.0	15.5	16.5	17.0
	AS-15 (scfm)	19.5	18.0	17.0	17.5	16.0	11.0	16.0	16.0	16.5	16.0

PRESSURE GAUGE

CELL 1	AS-1 (psi)	12.5	13.0	12.0	12.5	13.5	13.0	13.5	13.0	14.0	13.0
	AS-2 (psi)	12.5	13.0	12.0	12.5	13.5	12.5	13.5	13.0	14.0	13.0
CELL 2	AS-3 (psi)	12.5	13.0	12.5	12.5	13.0	11.5	13.5	12.5	14.0	13.0
	AS-4 (psi)	13.0	13.0	12.5	13.0	13.5	13.0	13.0	13.0	14.0	13.0
CELL 3	AS-5 (psi)	12.5	13.5	12.0	12.0	13.5	11.5	13.5	13.5	13.5	13.5
	AS-6 (psi)	13.0	13.3	12.0	12.5	13.0	12.5	13.0	14.0	13.0	13.0
	AS-7 (psi)	13.0	13.0	12.5	11.0	13.0	12.0	13.0	13.5	13.0	13.0
	AS-8 (psi)	12.5	13.0	12.0	11.5	13.0	12.0	14.0	14.0	13.0	12.5
	AS-9 (psi)	14.0	14.0	13.0	12.0	12.5	12.5	14.0	14.5	14.0	14.5
	AS-10 (psi)	13.0	13.5	12.0	11.0	13.0	13.0	13.0	13.5	13.0	13.0
	AS-11 (psi)	12.5	12.5	11.5	7.0	11.0	12.5	11.5	13.0	14.0	13.5
	AS-12 (psi)	14.0	14.0	13.0	12.5	14.0	13.5	14.5	15.0	14.5	14.0
	AS-13 (psi)	13.5	12.5	10.5	10.0	12.0	10.5	13.0	13.0	12.5	11.5
	AS-14 (psi)	14.0	13.5	12.5	12.5	14.0	14.0	14.0	15.0	14.0	14.0
	AS-15 (psi)	13.5	13.5	12.5	12.0	13.5	13.0	14.0	15.0	15.0	13.5

MONTHLY DOCUMENTATION SHEET
WELL HEAD GAUGES

DATE	9-27-19	10-18-19	11-27-19	12-09-19	1-21-20	2-25-20	3-20-20			
TIME	0930	1330	0925	1200	0915	0800	1025			
INITIALS	A.H.	A.H.	A.H.	AS	A.H.	A.H.	A.H.			

CELL 1	AS-1 (psi)	10.94	10.84	11.07	11.10	11.12	10.69	11.12		
	AS-2 (psi)	10.95	10.84	11.06	10.99	10.94	10.62	10.95		
	AS-3 (psi)	11.12	11.04	11.11	11.26	11.13	10.82	11.10		
	AS-4 (psi)	11.30	11.18	11.33	11.53	11.27	11.07	11.21		
	AS-5 (psi)	11.20	11.16	11.23	11.84	11.41	10.90	11.95		
CELL 2	AS-6 (psi)	11.60	11.42	11.83	11.67	11.66	11.09	11.12		
	AS-7 (psi)	11.70	11.50	11.85	11.85	11.48	11.25	11.30		
	AS-8 (psi)	11.78	11.57	11.81	11.91	11.78	10.66	11.24		
	AS-9 (psi)	11.68	11.98	12.50	12.91	12.07	12.02	11.93		
	AS-10 (psi)	11.64	11.45	11.64	11.77	11.69	11.26	11.21		
CELL 3	AS-11 (psi)	11.34	11.29	11.40	11.30	11.31	11.12	10.80		
	AS-12 (psi)	12.05	11.75	12.15	11.94	11.76	11.94	11.39		
	AS-13 (psi)	12.07	11.28	12.27	12.07	12.05	11.92	11.45		
	AS-14 (psi)	11.80	11.75	12.03	12.01	12.02	11.65	11.34		
	AS-15 (psi)	11.88	11.70	11.90	11.99	11.87	11.64	11.37		

CELL 1	SVE-1 (in H ₂ O)	4.6	4.3	4.0	3.9	4.0	4.0	4.1		
	SVE-2 (in H ₂ O)	6.2	6.1	5.9	5.8	6.1	5.6	5.7		
	SVE-3 (in H ₂ O)	5.9	5.7	5.2	6.0	5.8	6.0	6.0		
	SVE-4 (in H ₂ O)	5.8	5.5	5.0	4.6	4.9	4.6	5.3		
CELL 3	SVE-5 (in H ₂ O)	11.5	11.9	12.8	12.4	11.9	11.5	11.5		
	SVE-6 (in H ₂ O)	8.9	9.2	9.3	9.3	9.2	8.6	8.6		

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-19-20	3-20-20						
TIME	2:09 pm	1130						
OBSERVER'S INITIALS	M.G	A.H						

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	80°F RAIN	80°F cloudy						
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ALARMS

Alarm Code	NA	NA						
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P&ID

PDT-701 SVE (-wc)	0.14	0.09						
PT-701 SVE (-wc)	-50	-43						
PT-702 SVE (-wc)	64.4	66.9						
PT-2201 SPRG (psi)	15.5	15.5						
P-401 PUMP (cycles)	91	91						

P&ID2

PDT-801 SVE (-wc)	0.03	0.03						
PT-801 SVE (-wc)	-106	-98						
PT-802 SVE (-wc)	56.7	59.6						
PT-2301 SPRG (psi)	0.0	0.0						
P-501 PUMP (cycles)	1679	1679						

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-19-20	3-20-20							
TIME	2:09 pm	1120							
OBSERVER'S INITIALS	MG	AL							

HOURS METERS

B-701 SVE (hrs)	24965	24587							
C-2201 SPRG (hrs)	23016	23038							
C-2202 SPRG (hrs)	24192	24213							
B-801 SVE (hrs)	25808	25830							
C-2301 SPRG (hrs)	25403	25424							
C-2302 SPRG (hrs)	25571	25593							

SET POINTS

PAL-701 SVE (wc)	-20	-20							
PAH-702 SVE (wc)	100.0	100.0							
PAL-702 SVE (wc)	10.0	10.0							
PAH-2201 SPRG (psi)	30.0	30.0							
PAL-2201 SPRG (psi)	0.0	0.0							
PAL-801 SVE (wc)	-25	~25							
PAH-802 SVE (wc)	100.0	100.0							
PAL-802 SVE (wc)	10.0	10.0							
PAH-2301 SPRG (psi)	30.0	30.0							
PAL-2301 SPRG (psi)	0.0	0.0							
SV-2801 SPRG (min)	40	40							
SV-2802 SPRG (min)	20	20							
SV-2901 SPRG (min)	20	20							
SV-2902 SPRG (min)	20	20							

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

3-11-20 (Med) Control Panel Touch Screen

DATE	03-10-20	3-10-20	3-11-20	3-12-20	3-13-20	3-14-20	3-15-20	3-16-20	3-17-20	3-18-20
TIME	2:07 PM	12:50 PM	10:49 AM	12:25 PM	8:30 AM		10:25 AM	1:02 PM	2:25 PM	2:09 PM
OBSERVER'S INITIALS	MG	KA		MG	MG (Med)	KA	MG	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	80°F SUNNY	80°F CLOUDY	79°F OVERCAST	81°F SUNNY	78°F CLOUDY	79°F OVERCAST	80°F OVERCAST + LIGHT MISTING	81°F SUNNY	79°F OVERCAST + LIGHT RAIN
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.06	0.10	0.06	0.12	0.07	0.07	0.10	0.07	0.05
PT-701 SVE (-wc)	-37	-42	-46	-38	-35	-34	-41	-37	-43
PT-702 SVE (-wc)	67.2	66.2	65.6	67.0	69.8	68.4	67.3	67.4	65.8
PT-2201 SPRG (psi)	15.9	15.4	15.5	16.3	15.5	15.7	16.1	15.9	15.3
P-401 PUMP (cycles)	91	91	91	91	91	91	91	91	91

P&ID2

PDT-801 SVE (-wc)	0.06	0.07	0.13	0.06	0.03	0.02	0.01	0.07	0.05
PT-801 SVE (-wc)	-95	-103	-109	-97	-92	-86	-98	-96	-103
PT-802 SVE (-wc)	58.8	58.0	57.7	58.6	60.0	59.6	59.1	58.0	58.4
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	1679

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	03.10.20	3-11-20	3-12-20	3-13-20	3-14-20	3-15-20	3-16-20	3-17-20	3-18-20
TIME	2:07 pm	12:50 pm	10:49 AM	12:25 AM	8:30 AM	10:25 AM	1:02 PM	2:25 PM	2:09 PM
OBSERVER'S INITIALS	MG	KA	MG	MG	KA	MG	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	24350	24372	24394	24420	24440	24466	24492	24518	24541
C-2201 SPRG (hrs)	22800	22823	22845	22871	22891	22917	22943	22969	22992
C-2202 SPRG (hrs)	23976	23999	24021	24046	24066	24092	24119	24144	24168
B-801 SVE (hrs)	25593	25615	25637	25663	25683	25709	25735	25761	25784
C-2301 SPRG (hrs)	25187	25210	25232	25257	25277	25303	25330	25355	25379
C-2302 SPRG (hrs)	25355	25378	25400	25426	25446	25472	25498	25524	25547

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

2020

DATE	3-1-20	3-2-20	3-3-20	3-4-20	3-5-20	3-6-20	3-7-20	3-8-20	3-9-20
TIME	9:58 AM	12:42 PM	9:02 AM	12:45 PM	12:47 PM	12:42 PM	10:40 AM	1:30 AM	12:50 PM
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	MG	MG	DE	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	SUNNY 80°F	OVERCAST 81°F	MOSTLY CLOUDY 78°F	SUNNY 80°F	PARTLY CLOUDY + WINDY 81°F	BREEZY + SUNNY 80°F	WINDY + SUNNY 53°F	78° OVERCAST	80°F LIGHT RAIN
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ALARMS

Alarm Code	NA	NA	NA	NA	NA	NA	READY	POWER	NA	NA
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P&ID

PDT-701 SVE (-wc)	0.10	0.08	0.07	0.08	0.00	0.07	1/2	0.08	0.11	
PT-701 SVE (-wc)	-40	-41	-44	-38	-39	-33	6/3	-36	-41	
PT-702 SVE (-wc)	67.1	67.2	67.0	66.9	67.0	69.2	5/3	68.7	64.8	
PT-2201 SPRG (psi)	15.4	16.3	16.3	16.3	15.3	15.7	7/6	17.0	16.4	
P-401 PUMP (cycles)	91	91	91	91	91	91	6/5	91	91	

P&ID2

PDT-801 SVE (-wc)	0.02	0.06	0.02	0.04	0.01	0.08	2/6	0.09	0.10	
PT-801 SVE (-wc)	-106	-111	-115	-103	-107	-94	2/6	-96	-100	
PT-802 SVE (-wc)	57.3	57.9	57.6	58.0	57.2	59.0	5/4	59.3	57.6	
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	2/6	0.0	0.0	
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	5/4	1679	1679	

OFF

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-1-20	3-2-20	3-3-20	3-4-20	3-5-20	3-6-20	3-7-20	3-8-20	3-9-20
TIME	9:58 AM	12:42 PM	9:02 AM	12:45 PM	12:47 PM	12:42 PM	10:40 AM	7:30 AM	12:50 PM
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	MG	MG	DE	MG

HOURS METERS

B-701 SVE (hrs)	24142	24169	24189	24217	24241	24265		24295	24324
C-2201 SPRG (hrs)	22593	22620	22640	22668	22692	22716	22740	22746	22775
C-2202 SPRG (hrs)	23769	23795	23816	23843	23867	23891	23916	23922	23951
B-801 SVE (hrs)	25385	25412	25432	25460	25484	25508	25538	25567	
C-2301 SPRG (hrs)	24980	25006	25027	25054	25078	25102	25133	25162	
C-2302 SPRG (hrs)	25148	25175	25195	25223	25247	25270	25301	25330	

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	50	-20	-20
PAH-702 SVE (wc)	100	100	100	100.0	100.0	100.0	100	100.0	100.0
PAL-702 SVE (wc)	10	10	10.0	10.0	10.0	10.0	10	10.0	10.0
PAH-2201 SPRG (psi)	30	30	30.0	30.0	30.0	30.0	30	30.0	30.0
PAL-2201 SPRG (psi)	0	0	0.0	0.0	0.0	0.0	0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100	100	100.0	100.0	100.0	100.0	100	100.0	100.0
PAL-802 SVE (wc)	10	10	10.0	10.0	10.0	10.0	10	10.0	10.0
PAH-2301 SPRG (psi)	30	30	30.0	30.0	30.0	30.0	30	30.0	30.0
PAL-2301 SPRG (psi)	0	0	0.0	0.0	0.0	0.0	0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

2020

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

02-21-20

Control Panel Touch Screen

DATE	2-21-20	2-22-20	2-23-20	2-24-20	2-25-20	2-26-20	2-27-20	2-28-20	2-29-20
TIME	10:46 AM	10:16 AM	7:49 AM	8:12 AM	6:30	01:50 PM	12:50 PM	2:12 PM	12:21 PM
OBSERVER'S INITIALS	MG	TA	DE	MG	A.L.	MG	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	77°F SUNNY	78°F SUNNY	78°F SUNNY	76°F MOSTLY OVERCAST	78°F cloudy	79°F CLOUDY + OVERCAST	79°F MOSTLY CLOUDY + WINDY	80°F PARTLY CLOUDY + WINDY	80°F SUNNY + BREEZY
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.11	0.06	0.08	0.07	0.12	0.10	0.11	0.12	0.09
PT-701 SVE (-wc)	-35	-35	-38	-38	-37	-37	-37	-37	-34
PT-702 SVE (-wc)	70.3	69.7	68.5	68.2	68.0	70.6	70.8	69.9	69.8
PT-2201 SPRG (psi)	15.6	16.4	16.6	15.7	15.5	15.9	16.8	15.6	16.2
P-401 PUMP (cycles)	91	91	91	91	91	91	91	91	91

P&ID2

PDT-801 SVE (-wc)	0.08	0.05	0.03	0.06	0.04	0.08	0.06	0.04	0.12
PT-801 SVE (-wc)	-87	-99	-102	-104	-101	-101	-105	-103	-98
PT-802 SVE (-wc)	61.4	59.9	58.8	58.2	58.9	60.3	60.1	59.9	59.7
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	1679

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	02-21-20	2-22-20	2-23-20	2-24-20	2-25-20	2-26-20	2-27-20	2-28-20	2-29-20
TIME	MG	10:16 AM	7:49 AM	8:12 AM	0930	01:50 PM	12:50 pm	2:12 pm	12:21 pm
OBSERVER'S INITIALS	10:46 AM	KA	DE	MG	A.LL	MG	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	23928	23951	23972	23997	24022	24050	24073	24098	24120
C-2201 SPRG (hrs)	22378	22402	22423	22448	22473	22501	22524	22549	22571
C-2202 SPRG (hrs)	23554	23571	23599	23623	23649	23677	23700	23725	23747
B-801 SVE (hrs)	25171	25194	25215	25240	25265	25291	25316	25341	25363
C-2301 SPRG (hrs)	24765	24789	24810	24834	24860	24888	24911	24936	24958
C-2302 SPRG (hrs)	24933	24957	24978	25003	25028	25056	25079	25104	25126

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

2-18-20

KG

DATE	2-9-20	2-10-20	2-14-20	2-15-20	2-16-20	2-17-20	2-17-20	2-19-20	2-20-20
TIME	8:26 AM	0810	1200	11:12 AM	9:42 AM	1:55 pm	12:54 PM	1:46 PM	2:21 PM
OBSERVER'S INITIALS	DE	A.11	A.11	MG	KA	MG	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	78°F Cloudy	78°F Sunny	72°F Sunny	78°F OVERCAST	78°F SUNNY	75°F SNOWING	78°F SUNNY + WINDY	78°F SUNNY	78°F SUNNY
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.09	0.13	0.21	0.03	0.07	0.13	0.16	0.03	0.16
PT-701 SVE (-wc)	-40	-37	-28	-42	-37	-39	-35	-34	-32
PT-702 SVE (-wc)	68.7	69.8	74.8	67.8	69.4	68.9	70.2	71.6	71.1
PT-2201 SPRG (psi)	15.7	16.2	16.6	16.2	15.7	15.4	15.8	18.0	15.8
P-401 PUMP (cycles)	91	91	91	91	91	91	91	91	91

P&ID2

PDT-801 SVE (-wc)	0.04	0.01	0.13	0.06	0.09	0.13	0.10	0.10	0.05
PT-801 SVE (-wc)	-107	-105	-86	-109	-104	-103	-98	-88	-87
PT-802 SVE (-wc)	58.4	59.6	62.8	58.0	59.1	59.0	59.9	61.1	61.9
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	1679

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	2-9-20	2-10-20	2-14-20	2-15-20	2-16-20	2-17-20	2-18-20	2-19-20	2-20-20
TIME	8:12 AM	0810	1200	11:12 AM	9:42	1:55 PM	12:54 PM	1:46 PM	2:21 PM
OBSERVER'S INITIALS	DE	MT	BL	MG	KA	KG	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	23737	23761	23761	23784	23807	23835	23858	23883	23907
C-2201 SPRG (hrs)	22188	22212	22212	22235	22257	22286	22309	22333	22358
C-2202 SPRG (hrs)	23364	23387	23388	23411	23433	23461	23484	23509	23534
B-801 SVE (hrs)	24980	25004	25004	25027	25050	25078	25101	25126	25150
C-2301 SPRG (hrs)	24575	24598	24599	24622	24644	24672	24695	24720	24745
C-2302 SPRG (hrs)	24743	24767	24767	24790	24812	24841	24864	24888	24913

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET
2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	01-31-2020	2-1-20	2-2-20	2-3-20	2-4-20	2-5-20	2-6-20	2-7-20	2-8-20
TIME	1:09 PM	10:10 AM	8:40 AM	2:55 PM	09:25	1:51 PM	1:11 PM	12:52 PM	12:07 pm
OBSERVER'S INITIALS	MG	X	DE	MG	A.H.	DE	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	76°F OVERCAST	76°F OVERCAST	76°F Partly Sunny	78°F MOSTLY CLOUDY	76°F Cloudy	76°F Cloudy	76°F PARTLY CLOUDY	77°F OVERCAST	75°F MOSTLY SUNNY w/ SOME CLOUDS
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.10	0.15	0.14	0.10	0.10	0.07	0.11	0.05	0.08
PT-701 SVE (-wc)	-34	-38	-42	-40	-35	-35	-41	-39	-36
PT-702 SVE (-wc)	69.6	68.7	68.0	67.3	69.3	70.1	68.3	69.5	70.6
PT-2201 SPRG (psi)	15.5	16.4	16.6	15.7	15.7	16.10	16.0	15.6	15.6
P-401 PUMP (cycles)	91	91	91	91	91	91	91	91	91

P&ID2

PDT-801 SVE (-wc)	0.08	0.09	0.07	0.08	0.07	0.08	0.05	0.06	0.09
PT-801 SVE (-wc)	-100	-104	-112	-109	-100	-107	-112	-107	-99
PT-802 SVE (-wc)	59.2	58.9	57.9	56.8	59.2	58.7	58.2	58.1	60.3
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	1679

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	01.31.20	2-1-20	2-2-20	2-3-20	2-4-20	2-5-20	2-6-20	2-7-20	2-8-20
TIME	1:09 PM	10:04 AM	8:40 AM	2:55 PM	09:25	1:51 PM	1:11 pm	12:52 PM	12:07 PM
OBSERVER'S INITIALS	MG	KA	DE	MG	IA-H	DE	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	23526	23547	23569	23600	23618	23646	23670	23693	23717
C-2201 SPRG (hrs)	21977	21998	22020	22050	22069	22097	22121	22144	22168
C-2202 SPRG (hrs)	23153	23173	23196	23226	23245	23273	23296	23320	23343
B-801 SVE (hrs)	24769	24790	24812	24843	24861	24889	24913	24936	24960
C-2301 SPRG (hrs)	24364	24385	24407	24437	24456	24484	24507	24531	24554
C-2302 SPRG (hrs)	24532	24553	24575	24605	24624	24652	24676	24699	24723

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

2020

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	1-23-2020	1-24-2020	1-25-20	1-26-20	1-27-20	1-28-20	1-29-20	1-30-20	1-31-20
TIME	12:31 pm	3:02 pm	10:09 AM	11:59 AM	10:40	2:19 PM	12:31 pm	1:56 PM	1:58 PM
OBSERVER'S INITIALS	MG	MG	KR	MG	17.14	MG	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	76°F OVERCAST	76°F OVERCAST	76°F OVERCAST SNOW FLURRIES	75°F OVERCAST	80°F OVERCAST	74°F OVERCAST	75°F OVERCAST	76°F OVERCAST	
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.01	0.05	0.07	0.15	0.11	0.08	0.11	0.10	
PT-701 SVE (-wc)	-35	-38	-52	-38	-37	-34	-32	-33	
PT-702 SVE (-wc)	58.7	54.5	40.8	50.4	49.0	71.1	70.5	70.4	
PT-2201 SPRG (psi)	15.6	16.0	16.8	15.7	16.3	16.3	16.4	16.4	
P-401 PUMP (cycles)	91	91	91	91	91	91	91	91	

P&ID2

PDT-801 SVE (-wc)	0.03	0.03	0.02	0.11	0.13	0.05	0.04	0.04	
PT-801 SVE (-wc)	-103	-106	-107	-103	-105	-98	-99	-99	
PT-802 SVE (-wc)	58.3	57.8	58.9	60.4	59.9	60.0	59.8	59.3	
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	

DAILY DOCUMENTATION SHEET

2020

BUILDINGS 1 - 2

Control Panel Touch Screen

MB

DATE	1-23-2020	1-24-20	1-25-20	1-26-20	1-27-20	1-28-20	1-29-20	1-29-20	1-30-20
TIME	12:31 PM	3:02 PM	10:09 AM	11:59 AM	1040	2:22 PM	12:31 PM	12:31 PM	1:56 PM
OBSERVER'S INITIALS	MG	MG	KA	MG	AT.	MG	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	23338	23364	23383	23409	23432	23455	23477	23477	23503
C-2201 SPRG (hrs)	21789	21815	21834	21860	21883	21906	21928	21928	21954
C-2202 SPRG (hrs)	22964	22991	23010	23036	23058	23082	24 ³¹⁰⁴ 720	23104	23129
B-801 SVE (hrs)	24578	24604	24623	24649	24672	24698	24 ³¹²⁰ 715	24720	24746
C-2301 SPRG (hrs)	24172	24199	24218	24244	24266	24293	24403	24315	24340
C-2302 SPRG (hrs)	24340	24367	24386	24412	24434	24461		24483	24509

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	MB	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25		-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40		40	40
SV-2802 SPRG (min)	20	20	20	20	20	20		20	20
SV-2901 SPRG (min)	20	20	20	20	20	20		20	20
SV-2902 SPRG (min)	20	20	20	20	20	20		20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	12.3.19	12.4.19	12.5.19	12.6.19	12.7.19	12.8.19	12.9.19	1.21.20	1.22.20
TIME	2:11 pm	12:36 pm	9:00 AM	1:19 pm	6:42 AM	9:58 AM	1045	0845	12:39 PM
OBSERVER'S INITIALS	MG	MG	MG	MG	DE	MG	AS	AJ.	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	70°F SUNNY	67°F SUNNY	71°F SUNNY	71°F SUNNY	70°F CLOUDY	70°F OVERCAST	70°F CLOUDY, RAIN	52°F Sunny	76°F OVERCAST
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	D	D	D	D	D	D	D	0.21	0.07
PT-701 SVE (-wc)	O	O	O	O	O	O	O	-26	-36
PT-702 SVE (-wc)	W	W	W	W	W	W	W	60.5	62.7
PT-2201 SPRG (psi)	N	N	N	N	N	N	N	16.5	16.2
P-401 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	91	91

P&ID2

PDT-801 SVE (-wc)	0.03	0.01	0.07	0.02	0.04	0.13	0.07	0.19	0.09
PT-801 SVE (-wc)	-113	-111	-104	-98	-94	-108	-114	-79	-102
PT-802 SVE (-wc)	57.1	57.0	58.2	57.7	60.2	57.6	57.1	62.9	59.4
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1679	1679	1679	1679	1679	1679	1679	1679	1679

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	12-3-19	12-4-19	12-5-19	12-6-19	12-7-19	12-8-19	12-1-20	1-22-20
TIME	2:11 PM	12:36pm	9:00 AM	1:19 PM	6:42 AM	9:58 AM	0845	1239 PM
OBSERVER'S INITIALS	MG	MG	MG	MG	DE	MG	A.H.	MG

HOURS METERS

B-701 SVE (hrs)	23286	23286	23286	23286	23286	23286	23286	23314
C-2201 SPRG (hrs)	21737	21737	21737	21737	21737	21737	21737	21765
C-2202 SPRG (hrs)	22913	22913	22913	22913	22913	22913	22913	22941
B-801 SVE (hrs)	24383	24405	24425	24454	24471	24498	24526	24554
C-2301 SPRG (hrs)	23977	24000	24020	24048	24066	24093	24121	24148
C-2302 SPRG (hrs)	24145	24168	24188	24217	24234	24261	24289	24317

SET POINTS

PAL-701 SVE (wc)	-20	-20	-20	-20	-20	-20	-20	-20
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20

WEEKLY DOCUMENTATION SHEET

BUILDING 1

SYSTEM COMPONENTS

2020

DATE	03-16-20								
TIME	1:47 pm								
OBSERVER'S INITIALS	MG								

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA								
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-701

Pre-Filter Vacuum (-wc)	-37								
Post-Filter Vacuum (-wc)	-57								
Inlet Magnehelic* (in H ₂ O)	0.475								
Inlet Vacuum (-wc)	-41.1								

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	31								
Inlet Temperature (°F)	100								
Outlet Pressure (wc)	5.0								
Outlet Temperature (°F)	83								
Water Level Sight Glass (in)	4"								

AIR SPARGE (SPRG) COMPRESSOR C-2201

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	17.25								
Inlet Temperature (°F)	195								
Outlet Pressure (psi)	16.5								
Outlet Temperature (°F)	103								

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

2020

22 ME

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

ME

DATE	1-21-20	1-27-20	2-3-20	2-10-20	2-17-20	2-24-20	3-2-20	3-9-20	3-9-20
TIME	0845	1040	3:01 PM	0810	2:50PM	9:05 AM	1:35 PM	1:38 PM	1:38 PM
OBSERVER'S INITIALS	A.H	D.L	MG	A.H	MG	MG	MG	MG	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA		NA						
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-701

Pre-Filter Vacuum (-wc)	28	30	30	35	31	32	32	-35	-35
Post-Filter Vacuum (-wc)	48	52	51	55	52	53	54	-56	-56
Inlet Magnehelic* (in H ₂ O)	0.45	0.5	0.45	0.5	0.5	0.5	0.45	0.45	0.45
Inlet Vacuum (-wc)	30.5	33.5	32.5	38.7	34.4	35.3	35.1	-39.7	-39.7

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	30	30	31	32	32	31	31.5	32	31
Inlet Temperature (°F)	65	80	100	80	97	99	97	105	105
Outlet Pressure (wc)	3.0	3.0	3.5	4.0	9.0	9.0	5.0	5.0	5.0
Outlet Temperature (°F)	62	70	93	76	82	86	83	90	90
Water Level Sight Glass (in)	Ø	Ø	Ø	Ø	4"	4"	8"	3"	3"

AIR SPARGE (SPRG) COMPRESSOR C-2201

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	17.0	15.0	14.25	16.5	14.5	15.0	16.0	31	15.5
Inlet Temperature (°F)	170	190	199	185	190	195	200	105	200
Outlet Pressure (psi)	3.0	16.5	16.25	16.5	16.5	16.5	16.5		16.5
Outlet Temperature (°F)	96	105	107	106	104	105	106		106

ME

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

2020

DATE	1-21-20	1-27-20	2-3-20	2-10-20	2-17-20	2-24-20	3-2-20	3-9-20	3-16-20
TIME	0855	1056	2:48 PM	0805	0232 2:32 PM	8:47 AM	1:21 PM	1:27 PM	1:34 PM
OBSERVER'S INITIALS	A.H.	A.H.	M.G.	A.H.	M.G.	M.G.	M.G.	M.G.	M.G.

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA								
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-801

Pre-Filter Vacuum (-wc)	25	25	23	25	24	25	25	-23	-25
Post-Filter Vacuum (-wc)	30	30	25	27	28	27	27	-27	-28
Inlet Magnehelic* (in H ₂ O)	0.01	0.1	0.2	0.2	0.05	0.1	0.1	0.15	0.1
Inlet Vacuum (-wc)	27.2	26.6	25.3	31.6	26.5	26.5	26.5	-25.5	-27.2

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	60	59	57	60	58	58	58	57.5	58.5
Inlet Temperature (°F)	70	80	101	80	90	90	91	100	91
Outlet Pressure (wc)	3.0	3.0	2.5	3.0	3.0	2.5	2.9	2.5	2.5
Outlet Temperature (°F)	60	70	88	66	75	79	82	81	80
Water Level Sight Glass (in)	Ø	6"	Ø	Ø	Ø	Ø	Ø	Ø	Ø

AIR SPARGE (SPRG) COMPRESSOR C-2301

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	19.0	15.5	16.5	16.0	17.0	14.5	15.5	15.25	17
Inlet Temperature (°F)	200.0	210	220	205	215	210	215	218	216
Outlet Pressure (psi)	15.5	13.0	13.5	13.5	14.5	12.25	13.50	16.0	15.5
Outlet Temperature (°F)	122	124	123	122	126	125	125	125	124

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1
SVE MANIFOLD

DATE	10-18-19	11-27-19	12-9-19	1-21-20	2-25-20	3-20-20				
TIME	1500	1010	1045	0845	0930	1130				
INITIALS	R.H	A.H	AS	A.L	A.H	A.H				

System System MAGNEHELIC GAUGE*

SVE-15 (in H ₂ O)	System Building	Down	Down	0.03 25 A.H.	0.03	0.00				
SVE-14 (in H ₂ O)	Down			0.62 28 A.H.	0.17	0.17				
SVE-13 (in H ₂ O)				1.34 28 A.H.	0.11	0.10				
SVE-11 (in H ₂ O)				0.12 29 A.H.	0.23	0.25				
SVE-9 (in H ₂ O)				0.20 25 A.H.	0.05	0.04				

VACUUM GAUGE

SVE-15 (-wc)				25 30.2 A.H.	32	40				
SVE-14 (-wc)				28 30.2 A.H.	35	42				
SVE-13 (-wc)				28 30.2 A.H.	36	42				
SVE-11 (-wc)		✓	✓	14 29 A.H.	20	20				
SVE-9 (-wc)		✓	✓	25 30.2 A.H.	32	40				

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1 UPPER CELL
AIR SPARGE MANIFOLD

DATE	9-27-19	10-18-19	11-27-19	12-9-19	1-21-20	2-25-20	3-20-20			
TIME	1155	1500	1010	1045	0845	0930	1130			
INITIALS	A.I.	A.I.	A.I.	AS	A.I.	A.I.	A.I.			

System down System down System down system down ROTOMETER

UPPER CELL	AS-47 (scfm)	System down	System down	System down	System down	ROTOMETER				
						0	0	0		
	AS-38 (scfm)					5.0	8.0	8.0		
	AS-37 (scfm)					17.5	17.5	17.0		
	AS-23 (scfm)					15.0	14.5	14.0		
	AS-24 (scfm)					19.0	17.5	17.0		
	AS-39 (scfm)					16.5	15.5	15.0		
	AS-48 (scfm)					19.0	18.5	19.0		
	AS-52 (scfm)					17.5	17.5	18.0		
	AS-56 (scfm)					16.5	16.0	16.0		
	AS-54 (scfm)					15.0	13.0	14.0		
	AS-58 (scfm)					18.0	17.0	17.5		

PRESSURE GAUGE

UPPER CELL	AS-47 (psi)	System down	System down	System down	System down	PRESSURE GAUGE				
						0	0	0		
	AS-38 (psi)					16.0	20.0	17.0		
	AS-37 (psi)					10.0	10.0	10.0		
	AS-23 (psi)					14.5	14.0	14.0		
	AS-24 (psi)					15.0	14.5	15.0		
	AS-39 (psi)					14.0	13.5	13.5		
	AS-48 (psi)					14.0	13.0	13.0		
	AS-52 (psi)					12.0	13.0	12.5		
	AS-56 (psi)					13.0	13.0	13.0		
	AS-54 (psi)					15.0	17.0	17.0		
	AS-58 (psi)	✓	✓	✓	✓	10.	9.0	9.0		

MONTHLY DOCUMENTATION SHEET
BUILDING 1 LOWER CELL
AIR SPARGE MANIFOLD

DATE	7-29-19	9-27-19	10-18-19	11-27-19	12-9-19	1-21-20	2-25-20	3-20-20	
TIME	1345	1155	1520	1010	1045	0845	0930	1130	
INITIALS	R.H.	R.H.	R.H.	R.H.	AS	R.H.	R.H.	R.H.	

System down System down System down ROTOMETER

LOWER CELL	AS-49 (scfm)	System down			System Down	10	10.5	11.0	
		1	.	1					
	AS-49 (scfm)	9.5							
	AS-44 (scfm)	12.5					13.0	14.0	13.5
	AS-31 (scfm)	18.5					19.5	20.0	20.0
	AS-32 (scfm)	18.6					18.5	19.5	19.0
	AS-45 (scfm)	11.5					13.0	13.0	12.5
	AS-51 (scfm)	12.0					14.0	13.5	14.0
	AS-55 (scfm)	15.0					16.5	16.5	16.0
	AS-53 (scfm)	13.0					16.0	14.5	15.0
	AS-59 (scfm)	10.5					11.0	11.5	11.0
	AS-57 (scfm)	12.0					15.5	14.0	14.5
	AS-50 (scfm)	11.5					11.5	11.5	12.0

PRESSURE GAUGE

LOWER CELL	AS-49 (psi)	System down				13.0	12.0	12.5	
		1	.	1					
	AS-44 (psi)	14.5					15.0	14.5	15.0
	AS-31 (psi)	13.5					14.0	13.0	13.5
	AS-32 (psi)	13.5					13.0	13.0	16.0
	AS-45 (psi)	14.5					15.0	14.0	14.5
	AS-51 (psi)	13.0					13.0	12.5	13.0
	AS-55 (psi)	13.0					13.5	12.5	13.0
	AS-53 (psi)	13.5					14.0	13.5	13.5
	AS-59 (psi)	13.5					14.5	13.5	14.0
	AS-57 (psi)	14.0	✓	✓	✓	✓	14.5	14.0	14.0
	AS-50 (psi)	15.0					16.0	15.0	15.5

**MONTHLY DOCUMENTATION SHEET
BUILDING 1
PID MEASUREMENTS**

MEASUREMENTS									
DATE	2-25-20	3-10-20							
TIME	0930	1130							
INITIALS	A.H.	R.H.							

MONTHLY DOCUMENTATION SHEET

BUILDING 1

PID MEASUREMENTS

DATE	11-19-18	1-21-19	2/27/19	3-21-19	5-24-19	6/26/19	7-29-19	9-27-19	10-18-19	11-27-19	12-9-19	1-21-20
TIME	0900	1035	1130	1325	1025	1030	1345	1155	1500	1010	1045	0845
INITIALS	A.H.	D.H.	NP	N.H.	A.H.	NP	A.H.	A.H.	A.H.	A.H.	AS	A.H.

system down system down system down system down

SVE Effluent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	/	/	/	/	0.0
SVE - 15	moisture	moisture	moisture	moisture	0.0	0.0	0.0					0.0
SVE - 14	/	/	/	/	0.0	0.0	0.0					0.0
SVE - 13					0.0	0.0	0.0					0.0
SVE - 11					0.0	0.0	0.0					0.0
SVE - 9	↓	↓	↓	↓	0.0	0.0	0.0					0.0
Exhaust	0.0	0.0	0.0	0.0	0.0	0.0	0.0	✓	✓	✓	✓	0.0

MONTHLY DOCUMENTATION SHEET

BUILDING 2

SVE MANIFOLD

DATE	10-18-19	11-27-19	12-09-19	1-21-20	2-25-20	3-20-20				
TIME	1405	1005	1020	0855	0915	1120				
INITIALS	A.H.	A.H.	AS	A.H.	A.H.	A.H.				

MAGNEHELIC GAUGE*

SVE-10 (in H ₂ O)	0.04	0.14	0.10	0.07	1.25	0.3				
SVE-12 (in H ₂ O)	0.34	0.26	0.25	0.36	0.82	1.1				
SVE-8 (in H ₂ O)	0.02	0.13	0.11	0.25	0.17	0.18				
SVE-7 (in H ₂ O)	0.20	0.05	0.05	0.0	0.01	0.0				

VACUUM GAUGE

SVE-10 (-wc)	20	30	35	58	56	55				
SVE-12 (-wc)	20	25	28	12	35	44				
SVE-8 (-wc)	25	23	26	25	34	40				
SVE-7 (-wc)	60	50	49	60	54	54				

ELECTRICAL USAGE

Kilowatts (kwh)	501621.00	545954.28	—	568299.10	632545.70	681113.30				
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↑
did not obtain
no access to
building

* Keen plastic pinch valves on tubing to manehelic gauge closed except when taking a reading

MONTHLY DOCUMENTATION SHEET
BUILDING 2 UPPER CELL
AIR SPARGE MANIFOLD

DATE	10-18-19	11-27-19	12-09-19	1-21-20	2-25-20	3-20-20			
TIME	1405	1005	1020	0855	0915	1120			
INITIALS	A.H.	A.H.	A.S.	A.H.	A.H.	A.H.			

ROTOMETER

UPPER CELL	AS-20 (scfm)	13.0	13.0	13.0	14.5	13.0	15.5		
	AS-26 (scfm)	6.5	7.0	7.0	7.0	13.0	15.5		
	AS-16 (scfm)	10.0	10.0	10.0	10.5	14.0	15.5		
	AS-18 (scfm)	6.5	7.0	6.0	6.5	5.5	5.0		
	AS-22 (scfm)	16.0	16.0	16.0	19.0	12.5	15.0		
	AS-28 (scfm)	12.0	12.5	12.0	13.0	13.0	15.0		
	AS-30 (scfm)	14.0	14.0	8.0	8.5	6.0	14.50 14.00		
	AS-36 (scfm)	21.0	21.5	22.5	25	13.0	14.0		
	AS-42 (scfm)	9.0	9.0	9.0	10	15.5	14.0		
	AS-40 (scfm)	16.0	16.0	16.5	18	15.0	15.0		
	AS-34 (scfm)	22.0	22.0	23.5	25	18.0	15.0		

PRESSURE GAUGE

UPPER CELL	AS-20 (psi)	12.0	12.0	12.0	12.0	12.0	13.0		
	AS-26 (psi)	13.0	13.0	13.0	13.0	13.0	14.5		
	AS-16 (psi)	12.5	12.5	12.0	12.0	12.0	13.5		
	AS-18 (psi)	17.0	17.0	17.0	18.0	17.0	18.0		
	AS-22 (psi)	13.5	13.5	13.5	13.0	12.0	13.5		
	AS-28 (psi)	13.5	13.5	13.5	13.5	13.0	14.0		
	AS-30 (psi)	18.5	18.5	16.0	16.5	15.0	16.0		
	AS-36 (psi)	16.0	16.0	15.5	18.5	14.0	15.5		
	AS-42 (psi)	13.0	13.0	13.0	13.0	13.0	14.0		
	AS-40 (psi)	13.5	13.5	13.0	13.0	12.5	13.5		
	AS-34 (psi)	14.0	14.0	14.0	14.0	13.0	14.0		

MONTHLY DOCUMENTATION SHEET
BUILDING 2 LOWER CELL
AIR SPARGE MANIFOLD

DATE	10-18-19	11-27-19	12/09/19	1-21-20	2-25-20	3-20-20			
TIME	1405	1005	1020	0855	0915	1120			
INITIALS	A.H	A.L	AS	A.L	A.II	A.II			

ROTOMETER

LOWER CELL	AS-27 (scfm)	12.5	13.0	18.0	19.0	16.0	19.0		
	AS-25 (scfm)	15.0	15.0	13.5	17.0	12.0	14.0		
	AS-17 (scfm)	12.0	12.5	11.0	14.0	10.5	12.0		
	AS-19 (scfm)	13.0	14.0	13.0	16.0	10.5	13.0		
	AS-21 (scfm)	15.0	19.0	17.0	0	11.5	15.0		
	AS-29 (scfm)	10.0	11.0	10.0	12.5	12.0	14.0		
	AS-43 (scfm)	9.5	10.0	9.0	11.0	8.0	9.0		
	AS-46 (scfm)	18.0	20.5	20.5	25.0	12.0	15.0		
	AS-41 (scfm)	16.0	11.0	11.5	17.0	11.5	13.5		
	AS-33 (scfm)	15.0	16.0	15.0	18.0	12.5	16.5		
	AS-35 (scfm)	15.0	16.0	15.0	18.0	12.5	15.0		

PRESSURE GAUGE

LOWER CELL	AS-27 (psi)	14.5	13.5	11.5	11.5	13.0	13.5		
	AS-25 (psi)	14.0	13.0	13.0	13.5	12.5	12.5		
	AS-17 (psi)	14.5	13.5	13.5	14.5	13.0	13.0		
	AS-19 (psi)	16.0	15.0	15.0	16.0	14.5	14.5		
	AS-21 (psi)	15.0	14.0	13.5	17.0	12.5	12.5		
	AS-29 (psi)	15.0	14.0	13.5	14.5	13.0	13.0		
	AS-43 (psi)	13.5	13.0	13.0	13.5	12.5	12.5		
	AS-46 (psi)	15.5	14.5	13.5	14.5	13.0	13.0		
	AS-41 (psi)	13.5	13.0	12.5	13.0	12.5	12.5		
	AS-33 (psi)	14.5	13.5	13.0	14.0	7.0	13.5		
	AS-35 (psi)	14.5	13.5	13.0	14.0	13.0	13.0		

**MONTHLY DOCUMENTATION SHEET
BUILDING 2
PID MEASUREMENTS**

MONTHLY DOCUMENTATION SHEET

BUILDING 2

PID MEASUREMENTS

DATE	11-19-18	1-21-19	2/27/19	3-21-19	5-24-19	6/26/19	7-29-19	9-27-19	10-18-19	11-27-19	12-09-19	1-21-20
TIME	0650	1015	1155	1315	1015	1045	1335	1145	1405	1005	1020	0855
INITIALS	A.H.	W.H.	AS	R.H.	R.H.	N	A.H.	A.H.	A.H.	A.H.	A.S.	W.H.

Appendix D

First Quarter 2020 Groundwater Sampling Data Sheets

February 2020 Groundwater Sampling Checklist

Well ID	Depth to Water	Date of Water Level Reading	Depth of Intake	Sample Date	Total Depth	Notes
RAMW-01	26.74	2-11-20	38.00	2-14-20	46.00	FBLK02
RAMW-02	26.59		37.00	2-14-20	44.83	Collect MS/MSD02
RAMW-03	26.39		38.00	2-14-20	45.29	HSSER-DUP02
RAMW-04	26.18		41.00	2-13-20	44.80	EBLK02
RAMW-05	25.06		36.00	2-13-20	43.71	
RAMW-06	25.10		37.00	2-13-20	44.29	
RAMW-07	29.58		41.00	2-13-20	48.64	
RAMW-08	25.68		37.00	2-13-20	44.29	
GMZ-01	29.15		40.00	2-12-20	47.82	
GMZ-02	26.79		37.00	2-13-20	44.79	Collect MS/MSD01
GMZ-03	26.14		37.00	2-13-20	44.62	HSSER-DUP01
GMZ-04	24.31		38.00	2-12-20	44.88	
MW-07FGA	24.14	✓	39.00	2-12-20	46.26	
MW-203	24.90	2-13-20	40.00	2-13-20	49.40	
PMW-01	26.87	2-11-20	37.00	2-13-20	44.25	
PMW-02	26.83		37.00	2-13-20	44.93	EBLK01
SMW-01	27.11		32.00	2-12-20	41.09	41.24
SMW-02	23.53		32.00	2-12-20	39.69	
SMW-04	26.41		35.00	2-14-20	42.35	
SMW-08	26.60		34.00	2-12-20	41.93	FBLK01
SMW-19	25.12		35.00	2-12-20	41.09	
SMW-20	25.50		33.00	2-13-20	40.02	
SMW-21	24.99		34.00	2-12-20	41.39	
BGW-01	25.00		N/A	N/A	—	Not Sampled
BGW-02	25.41		N/A	N/A	—	Not Sampled
BGW-03	25.42	✓	N/A	N/A	—	Not Sampled

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/12/20 Time: Start 10:50 (24hr)
Project No: 60595520-4212 Finish 12:10
Site Location: Rockford, Illinois
Weather: 32° overcast Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 47.74 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38 40
Water table depth (ft): 28.67 Casing type/diameter: 2" PVC Minimum purge volume: 7.83 90.28 (gals)
Water column length (ft): 19.07 (calculations on reverse)

2 WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	U90378x
	Lamotte	2020	6070-4615
	Lamotte	Smart 2 Colorimeter	1031-0612
Begin purge at	1100		

(continued on back)

Sample Collector(s):

Date:

02/12/20

SAMPLE COLLECTION DATA

Well ID:

GMZ-45 01

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/13/20 Time: Start 1225 (24hr)
Project No: 60595520-4212 Finish 1350
Site Location: Rockford, Illinois
Weather: 14° overcast, snow Collector(s): A. Sokołowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.77 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 26.79 Casing type/diameter: 2" PVC Minimum purge volume: 8.79 (gals)
Water column length (ft): 17.98 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556-MPS Pro DSS	U90378X
	Lamotte	2020	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-0612
Begin purge at	1240		

Sample Collector(s):

Andy Sutkowsky

Date:

(continued on back)
02/13/20

(continued on back)

SAMPLE COLLECTION DATA

Well ID: GMZ-02

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/13/20 Time: Start 1100 (24hr)
Project No: 60595520-4212 Finish 1225
Site Location: Rockford, Illinois
Weather: 14° overcast, snow Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 26.14 Casing type/diameter: 2" PVC Minimum purge volume: 8.87 (gals)
Water column length (ft): 18.15 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS Pro DSS	U90378X
	Lamotte	2020we	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-DL12
Begin purge at	11/5		

Sample Collector(s):

Aby Sokołowsky

Date:

(continued on I
02 / 13 / 20)

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

GMZ-03

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/12/20 Time: Start 1330 (24hr)
Project No: 60595520-4212 Finish 1510
Site Location: Rockford, Illinois
Weather: 32° overcast Collector(s): A. Sukolansky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.84 Screen interval(ft): 15 Approx. depth of pump intake(ft): 15 40-38
Water table depth (ft): 22.8 23.80Casing type/diameter: 2" PVC Minimum purge volume: _____ (gals)
Water column length (ft): _____ (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	490378X
	Lamotte	2020	6070-4515
	Lamotte	Smart 2 Colorimeter	1031-0612
Begin purge at	1355		

Sample Collector(s):

Date:

(continued on back)

02 / 12 / 20

SAMPLE COLLECTION DATA

Well ID:

GMZ-04

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/12/20 Time: Start 12:10 (24hr)
Project No: 60595520-4212 Finish 13:20
Site Location: Rockford, Illinois
Weather: 32° overcast Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 46.16 Screen interval(ft): 15 Approx. depth of pump intake(ft): 39
 Water table depth (ft): 23.70 Casing type/diameter: 4" SS Minimum purge volume: 44.0 (gals)
 Water column length (ft): 22.46 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	490378X
	Lamotte	2020	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-0612
Begin purge at	<u>1225</u>		

Sample Collector(s):

Aly Sipowicz

Date: 02/12/20

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

MW-07FGA

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 1520 (24hr)
Project No: 60595520-4212 Finish 1630
Site Location: Rockford, Illinois
Weather: Sunny 10-15°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 48.87 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40
 Water table depth (ft): 24.90 Casing type/diameter: 2" SS Minimum purge volume: 11.8 (gals)
 Water column length (ft): 23.97 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	1570-101911
	Lamotte	2020	12960-3511
	Lamotte	Smart 2 Colorimeter	0154-4317
Begin purge at	1530		

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Sample Collector(s):

John M. Holt

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID: MW-203

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/13/20 Time: Start 1350 (24hr)
Project No: 60595520-4212 Finish 1455
Site Location: Rockford, Illinois
Weather: 11° partly sunny Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.15 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37
 Water table depth (ft): 26.87 Casing type/diameter: 2" PVC Minimum purge volume: 8.44 (gals)
 Water column length (ft): 17.28 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	U90378X
	Lamotte	2020	6070-4515
	Lamotte	Smart 2 Colorimeter	1037-0612
Begin purge at	1405		

Sample Collector(s):

(continued on back)

Date: 02/13/20

SAMPLE COLLECTION DATA

Well ID: PMW-01

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/13/20 Time: Start 15:05 (24hr)
Project No: 60595520-4212 Finish 15:16:25
Site Location: Rockford, Illinois
Weather: 11° Sunny Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.94 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37
 Water table depth (ft): 26.83 Casing type/diameter: 2" PVC Minimum purge volume: 8.85 (gals)
 Water column length (ft): 18.11 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	U90378X
	Lamotte	2020	6070 - 4515
	Lamotte	Smart 2 Colorimeter	1032 - 0612
Begin purge at	<u>1520</u>		

(continued on back)

Sample Collector(s):

Date:

02 / 13 / 20

SAMPLE COLLECTION DATA

Well ID: PMW-02

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/14/28 Time: Start 0900 (24hr)
Project No: 60595520-4212 Finish 1030
Site Location: Rockford, Illinois
Weather: -4 sunny COLD Collector(s): A. Sukołowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 46.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 26.74 Casing type/diameter: 2" PVC Minimum purge volume: 7.41 (gals)
Water column length (ft): 19.26 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS Pro DSS	U90378X
	Lamotte	2020pro	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-0612
Begin purge at	<u>0920</u>		

Sample Collector(s):

Andy Sotkobsky

Date: 02/14/20

(continued on back)

SAMPLE COLLECTION DATA

Well ID: **RAMW-01**

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-14-20 Time: Start 0955 (24hr)
Project No: 60595520-4212 Finish 1005
Site Location: Rockford, Illinois
Weather: Sunny -5 to 50F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.82 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 26.59 Casing type/diameter: 2" PVC Minimum purge volume: 9.0 (gals)
Water column length (ft): 18.23 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	1513101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	1005		

(continued on back)

Sample Collector(s):

Date: 2-14-20

SAMPLE COLLECTION DATA

Well ID: RAMW-02

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-14-20 Time: Start 0905 (24hr)
Project No: 60595520-4212 Finish 0930
Site Location: Rockford, Illinois
Weather: Sunny -5 to 5° F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 45.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 20.39 Casing type/diameter: 2" PVC Minimum purge volume: 9.3 (gals)
Water column length (ft): 18.90 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	0915		

(continued on back)

Sample Collector(s):

John P. Hilt

Date: 2-14-20

SAMPLE COLLECTION DATA

Well ID:

RAMW-03

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 1415 (24hr)
Project No: 60595520-4212 Finish 1510
Site Location: Rockford, Illinois
Weather: Sunny 10-15°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.84 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 26.18 Casing type/diameter: 2" PVC Minimum purge volume: 9.2 (gals)
Water column length (ft): 18.166 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	1420		

(continued on back)

Sample Collector(s):

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID: RAMW-084

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid



Well ID:

RAMW-05

Page 1 of 2

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 1215 (24hr)
Project No: 60595520-4212 Finish 1335
Site Location: Rockford, Illinois
Weather: Cloudy 10.15°C Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 43.73 Screen interval(ft): 15 Approx. depth of pump intake(ft): 36
 Water table depth (ft): 25.06 Casing type/diameter: 2" PVC Minimum purge volume: 9.2 (gals)
 Water column length (ft): 18.67 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	16-B1019-11
	Lamotte	2020	12946-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	1225		

(continued on back)

Sample Collector(s):

almost

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID: **RAMW-05**

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 1115 (24hr)
Project No: 60595520-4212 Finish 1210
Site Location: Rockford, Illinois
Weather: Cloudy 10-15° F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.27 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 25.10 Casing type/diameter: 2" PVC Minimum purge volume: 9.4 (gals)
Water column length (ft): 19.17 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	1130		

(continued on back)

Sample Collector(s):

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID: RAMW-06

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 0950 (24hr)
Project No: 60595520-4212 Finish 1100
Site Location: Rockford, Illinois
Weather: Snow 10-15°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 48.64 Screen interval(ft): 15 Approx. depth of pump intake(ft): 41
Water table depth (ft): 29.58 Casing type/diameter: 2" PVC Minimum purge volume: 9.7 (gals)
Water column length (ft): 19.06 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	0154-4317
Begin purge at	1000		

(continued on back)

Sample Collector(s):

John Roberts

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID:

RAMW-07

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-13-20 Time: Start 0905 (24hr)
Project No: 60595520-4212 Finish 0945
Site Location: Rockford, Illinois
Weather: Snow 10-15° F Collector(s): A. Harrington

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 25.608 Casing type/diameter: 2" PVC Minimum purge volume: 9.1 (gals)
Water column length (ft): 18.61 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	015411-4317
Begin purge at	0910		

(continued on back)

Sample Collector(s):

John B. Hilt

Date: 2-13-20

SAMPLE COLLECTION DATA

Well ID:

RAMW-048

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-12-20 Time: Start 0940 (24hr)
Project No: 60595520-4212 Finish 1040
Site Location: Rockford, Illinois
Weather: Sunny 20-30°F Collector(s): A. Hellatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.12 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 27.11 Casing type/diameter: 2" PVC Minimum purge volume: 5.9 (gals)
Water column length (ft): 12.01 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	12910-3511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	0945		

(continued on back)

Sample Collector(s):

Unpublished

Date: 2-12-20

SAMPLE COLLECTION DATA

Well ID: **SMW-01**

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-12-20 Time: Start 1050 (24hr)
Project No: 60595520-4212 Finish 1200
Site Location: Rockford, Illinois
Weather: Cloudy 20-30°F Collector(s): A. Hellatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.72 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 23.53 Casing type/diameter: 2" PVC Minimum purge volume: 8,0 (gals)
Water column length (ft): 16.19 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS Pro	1C3101911
	Lamotte	2020	1296-3511
	Lamotte	Smart Colorimeter	01541-61317
Begin purge at	1055		

(continued on back)

Sample Collector(s):

Date: 2-12-26

SAMPLE COLLECTION DATA

Well ID:

SMW-02

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/14/20 Time: Start 1030 (24hr)
Project No: 60595520-4212 Finish 1155
Site Location: Rockford, Illinois
Weather: -4 sunny COLD Collector(s): A. Sokolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 42.31 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35
Water table depth (ft): 26.41 Casing type/diameter: 2" PVC Minimum purge volume: 7.77 (gals)
Water column length (ft): 15.90 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	U90378X
	Lamotte	2020	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-0612
Begin purge at	1040		

(continued on back)

Sample Collector(s):

Brooks

Date:

02/14/20

* Purged water from well for a 1 hour period. ORP and turbidity did not stabilize over 1 hour of readings, sampled well at this time.

SAMPLE COLLECTION DATA

Well ID:

SMW-04

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/12/20 Time: Start 0935 (24hr)
Project No: 60595520-4212 Finish 1045
Site Location: Rockford, Illinois
Weather: 32° partly sunny Collector(s): A. Skolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.81 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34
Water table depth (ft): 26.10 Casing type/diameter: 2" PVC Minimum purge volume: 7.68 (gals)
Water column length (ft): 15.71 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	656 MPS Pro DSS	1190 J78X
	Lamotte	2020	6070 - 4515
	Lamotte	Smart 2 Colorimeter	1839 - 0612
Begin purge at <u>0.950</u> DMS			

Sample Collector(s):

Date:

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

SMW-08

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-12-20 Time: Start 1220 (24hr)
Project No: 60595520-4212 Finish 1335
Site Location: Rockford, Illinois
Weather: Cloudy 20-30°F Collector(s): A. Hollister

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 40.94 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35
Water table depth (ft): 25.12 Casing type/diameter: 2" SS Minimum purge volume: 7.8 (gals)
Water column length (ft): 15.84 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B101911
	Lamotte	2020	1296-3511
	Lamotte	Smart 2 Colorimeter	01541-4217
Begin purge at	1225		

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1235	5000	13.6	7.24	1215	185.9	8.71	42.0	500	25.12	cloudy/mine
1240	7500	13.9	7.21	1220	109.5	8.25	43.4	500	25.12	↓
1245	10,000	14.0	7.21	1225	122.4	7.84	29.9	500	25.12	clear/mine
1250	12,500	14.0	7.21	1221	143.9	7.68	23.5	500	25.12	
1255	15,000	13.9	7.21	1213	142.8	7.57	19.9	500	25.12	
1300	17,500	14.0	7.20	1210	142.7	7.50	17.3	500	25.12	
1305	20,000	14.0	7.20	1207	141.3	7.46	14.6	500	25.12	
1310	22,500	14.0	7.20	1207	144.3	7.41	13.2	500	25.12	
1315	25,000	14.0	7.20	1206	144.3	7.35	11.6	500	25.12	
1320	27,500	14.0	7.20	1204	146.3	7.32	11.03	500	25.12	
1325	30,000	14.1	7.20	1203	146.4	7.28	9.65	500	25.12	↓

(continued on back)

Sample Collector(s):

absent

Date: 12-12-20

SAMPLE COLLECTION DATA

Well ID:

SMW-19

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 02/13/20 Time: Start 0940 (24hr)
Project No: 60595520-4212 Finish 1100
Site Location: Rockford, Illinois
Weather: 14° overcast, snow Collector(s): A. Sukolowsky

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 40.03 Screen interval(ft): 15 Approx. depth of pump intake(ft): 33
 Water table depth (ft): 25.50 Casing type/diameter: 2" PVC Minimum purge volume: 7.10 (gals)
 Water column length (ft): 14.53 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
YSI Lamotte Lamotte	YSI	556 MPS Pro DSS	A90378X
	Lamotte	2020 WL	6070-4515
	Lamotte	Smart 2 Colorimeter	1039-0612
Begin purge at	1000		

(continued on back)

Sample Collector(s):

Date:

02 / 13 / 20

SAMPLE COLLECTION DATA

Well ID:

SMW-20

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 2-12-20 Time: Start 1425 (24hr)
Project No: 60595520-4212 Finish 1525
Site Location: Rockford, Illinois
Weather: Cloudy 20-30°F Collector(s): A. Hallatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.40 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34
Water table depth (ft): 24.99 Casing type/diameter: 2" PVC Minimum purge volume: 7.9 (gals)
Water column length (ft): 16.41 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	556 MPS	15B10911
	Lamotte	2020	1296-2511
	Lamotte	Smart 2 Colorimeter	01541-4317
Begin purge at	1430		

(continued on back)

Sample Collector(s):

John Bell

Date: 2-12-20

SAMPLE COLLECTION DATA

Well ID: **SMW-21**

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-12-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	19J101007	Field Env	7903469 Exp4-1-21	4.00 @ 25C	14.3	3.96	4.00	AH 0851	
pH 7.00				7906290 Exp6-1-21		14.3	7.15	7.05	AH 0844	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	14.3	10.06	10.06	AH 0858	
Specific Cond.				7901420 Exp1-1-21		14.1	1518	1515	AH 0838	
ORP			Reagents	790723 Exp 4-20	— mV @ — C	16.5	252.7	242.0	AH 0905	
DO				H2O Saturated Air		14.2	86.6	102.3	AH 0830	
Turbidity	LaMotte 2020	6070-4515			0 NTU	NA	0.0	0.0	AH 0830	
					10 NTU	NA	10.01	10.01	AH 0830	
						NA				

BP = Barometric Pressure (mmHg)

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-12-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	15B101911	Field Env	7903469 Exp4-1-21	4.00 @ 25C	14.5	3.91	4.00	AH 0851	
pH 7.00				7906290 Exp6-1-21		14.6	7.11	6.95	AH 0844	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	14.4	10.11	10.00	AH 0858	
Specific Cond.				7901420 Exp1-1-21		14.5	1472	1445	AH 0838	
ORP			Reagents	790723 Exp 4-20	— mV @ — C	16.7	244.0	23.0	AH 0905	
DO				H2O Saturated Air		14.9	90.3	97.8	AH 0820	
Turbidity	LaMotte 2020	1296-3511	XX		0 NTU	NA	0.01	0.00	AH 0830	
			XX			NA				
			XX		10 NTU	NA	10.04	10.01	AH 0830	
			XX			NA				

BP = Barometric Pressure (mmHg)

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-13-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	19J101007	Field Env	7903469 Exp4-1-21	4.00 @ 25C	14.2	4.00	4.00	A140834	
pH 7.00			Field Env	7906290 Exp6-1-21		14.5	7.12	7.05	A140825	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	13.9	9.95	10.00	A140841	
Specific Cond.			Field Env	7901420 Exp1-1-21		14.3	15.30	15.47	A140818	
ORP			Reagents	790723 Exp 4-20	mV @ ____ C	13.9	246.1	245.4	A140848	
DO			H2O Saturated Air	X		100% H2O Sat. Air	121.3	102.4	A140810	
Turbidity	LaMotte 2020	6070-4515	X	X	0 NTU	NA	0.02	0.00	A140810	
			X	X		NA				
			X	X		NA	9.94	10.01	A140810	
			X	X		NA				

BP = Barometric Pressure (mmHg)

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-13-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	15B101911	Field Env	7903469 Exp4-1-21	4.00 @ 25C	14.2	3.98	4.00	AH0834	
pH 7.00			Field Env	7906290 Exp6-1-21		14.5	7.17	7.00	AH0825	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	13.8	9.96	10.00	AH0841	
Specific Cond.			Field Env	7901420 Exp1-1-21		14.6	1457	1449	AH0818	
ORP			Reagents	790723 Exp 4-20	— mV @ — C	13.8	235.3	231.0	AH0848	
DO			H2O Saturated Air	X		14.3	110.2	97.9	AH0810	
Turbidity	LaMotte 2020	1296-3511	X	X	0 NTU	NA	0.00	0.00	AH0810	
			X	X		NA				
			X	X		NA	10.07	10.01	AH0810	
			X	X		NA				

BP = Barometric Pressure (mmHg)

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-14-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	19J101007	Field Env	7903469 Exp4-1-21	4.00 @ 25C	10.5	4.09	4.00	A1+0820	
pH 7.00			Field Env	7906290 Exp6-1-21		10.6	7.10	7.07	AH 0814	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	10.6	9.94	10.00	A1+0826	
Specific Cond.			Field Env	7901420 Exp1-1-21		9.7	1538	1569	A1+0809	
ORP			Reagents	790723 Exp 4-20	— mV @ — C	10.5	250.5	249.8	AH 0831	
DO			H2O Saturated Air	X		3.5	105.1	104.0	AH 0801	
Turbidity	LaMotte 2020	6070-4515	X	X	0 NTU	NA	0.01	0.01	AH 0801	
			X	X		NA				
			X	X	10 NTU	NA	10.02	10.01	AH 0801	
			X	X		NA				

BP = Barometric Pressure (mmHg)

Project Name: UTC SER AREA 9/10

Project Number: 60595520

Date: 2-14-20

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro	15B101911	Field Env	7903469 Exp4-1-21	4.00 @ 25C	10.7	4.04	4.00	AH 0820	
pH 7.00			Field Env	7906290 Exp6-1-21		10.9	7.12	7.00	AH 0814	
pH 10.00			Field Env	7902394 Exp2-1-21	10.00 @ 25C	10.8	9.92	10.00	AH 0826	
Specific Cond.			Field Env	7901420 Exp1-1-21		10.7	1531	1513	AH 0809	
ORP			Reagents	790723 Exp 4-20	— mV @ — C	10.6	235.9	231.0	AH 0831	
DO			H2O Saturated Air	X		11.8	100.2	99.5	AH 0801	
Turbidity	LaMotte 2020	1296-3511	X	X	0 NTU	NA	0.02	0.00	AH 0801	
			X	X		NA				
			X	X	10 NTU	NA	9.88	9.99	AH 0801	
			X	X		NA				

BP = Barometric Pressure (mmHg)



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Client / Reporting Information		Project Information										Requested Analysis						Matrix Codes													
Company Name: AECOM		Project Name: UTAS Plants 1/2 Facility																													
Street Address 41320 Winfield Rd		Street Waterville FL 66555		Billing Information (if different from Report to)																											
City Waterville	State FL	Zip 66555	City Rockford	State IL	Company Name																										
Project Contact Peter Hollatz	E-mail (607)455-20	Project #	Street Address																												
Phone # 716-679-1234	Client Purchase Order #	City Rockford		State IL		Zip 60081																									
Sampler(s) Name(s) A. Hollatz/A. Suckowasny	Phone #	Project Manager Peter Hollatz	Attention:																												
SGS Sample #	Field ID / Point of Collection	Collection										Number of preserved Bottles																			
		MEOH/DI Vial #	Date	Time	Sampled by	Grab (G)	Comp (C)	Matrix	# of bottles	HCl	NaOH	HNO ₃	H ₂ SO ₄	NONE	DI Water	MECH	ENCORE														
	HSSFR-SMW01-021220	2-12-20	1035	AH	G	GW	3	X										X													
	HSSFR-SMW01B-021220	2-12-20	1035	AS	G	GW	3	Y										X													
	HSSFR-FBLK01-021220	2-12-20	1045	AS	G	GW	3	X										X													
	HSSER-SMW02-021220	2-12-20	1150	AH	G	GW	3	X										X													
	HSSER-GM201-021220	2-12-20	1155	AS	G	GW	3	Y										X													
	HSSER-MW077B-021220	2-12-20	1300	AS	G	GW	3	X										X													
	HSSFR-SMW19-021220	2-12-20	1325	AH	G	GW	3	X										X													
	HSSER-6M204-021220	2-12-20	1450	AS	G	GW	3	K										X													
	HSSER-SMW21-021220	2-12-20	1515	AH	G	GW	3	X										X													
	HSSER-SMW20-021320	2-13-20	1045	AS	G	GW	3	K										X													
	HSSER-GM203-021320	2-13-20	1205	AS	G	GW	3	X										X													
	HSSER-GM202-021320	2-13-20	1325	AS	G	GW	3	X										X													
Turn Around Time (Business Days)										Deliverable										Comments / Special Instructions											
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____										<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKP										<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MA MCP Criteria <input type="checkbox"/> CT RCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format						* List VOC's B					
Approved By (SGS PM): Date: _____ _____										Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data																					
All data available via Lablink										Approval needed for 1-3 Business Day TAT										http://www.sgs.com/en/terms-and-conditions											
Sample Custody must be documented below each time samples change possession, including courier delivery.																															
Relinquished by: John	Date / Time: 2-14-20 1000	Received By: 1	Relinquished By: 2								Date / Time: 2		Received By:																		
Relinquished by: John	Date / Time: 3	Received By: 3	Relinquished By: 4								Date / Time: 4		Received By:																		
Relinquished by: John	Date / Time: 5	Received By: 5	Custody Seal #								<input type="checkbox"/> Intact	Preserved where applicable				On Ice	Cooler Temp. °C														
											<input type="checkbox"/> Not Intact	<input type="checkbox"/> Absent				<input type="checkbox"/>															



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Client / Reporting Information		Project Information																	
Company Name: AECOM		Project Name: UTAS Plant 1/2 Facility																	
Street Address: 4730 Winfield Rd		Street		Billing Information (if different from Report to)															
City Warrenville IL	State 60555	City Rockford IL	State IL									Company Name							
Project Contact Peter Hollatz	E-mail 160595520	Project #	Street Address																
Phone #			Client Purchase Order #		City		State		Zip										
Sampler(s) Name(s) A. Hollatz / N. Sulikowsky	Phone #	Project Manager Peter Hollatz		Attention:															
SGS Sample #		Field ID / Point of Collection		MEOH/DI Vial #		Collection		Matrix	# of bottles	Number of preserved Bottles						LAB USE ONLY			
						Date	Time			Sampled by	Grab (G) Comp (C)	H2O	NaOH	HNO3	H2SO4				
HSER-M501-021320		2-13-20 1325		AS G		GW	3	X											
HSER-M3P01-021320		2-13-20 1325		AS G		GW	3	X											
HSER-PM601-021320		2-13-20 1440		AS G		GW	3	X											
HSER-PW02-021320		2-13-20 1605		AS G		GW	3	X											
HSER-EBK01-021320		2-13-20 1620		AS G		GW	3	X											
HSER-MW03-021320		2-13-20 1620		AS G		GW	3	X											
HSER-DU01-021320		2-13-20 0000		AS G		GW	3	X											
HSER-SMW04-021420		2-14-20 1140		AS G		GW	3	X											
HSER-TBK01-021820		2-13-20		— —		—	2	X											
Turn Around Time (Business Days)														Comments / Special Instructions <i># LIST 13 VOL'S</i>					
Approved By (SGS PM): Date: <input type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____ All data available via Lablink						Deliverable <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKQP <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MA MCP Criteria <input type="checkbox"/> CT RCP Criteria <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data												<input type="checkbox"/> DOD-QSM5	
Sample Custody must be documented below each time samples change possession, including courier delivery.														http://www.sgs.com/en/terms-and-conditions					
Relinquished by: 1	Date / Time: 2-14-20 1800	Received By: 1	Relinquished By: 2	Date / Time: 2	Received By: 2														
Relinquished by: 3	Date / Time: 	Received By: 3	Relinquished By: 4	Date / Time: 	Received By: 4														
Relinquished by: 5	Date / Time: 	Received By: 5	Custody Seal #	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Preserved where applicable <input type="checkbox"/> Absent	On Ice	Cooler Temp. °C												



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Client / Reporting Information		Project Information										Requested Analysis		Matrix Codes						
Company Name: AECOM		Project Name: UTAS Plants 1/2 Facility																		
Street Address 4320 Winfield Rd		Street		Billing Information (if different from Report to)																
City Warrenville IL	State IL	Zip 60555	City Rockford IL	State IL	Company Name															
Project Contact Peter Hollatz	E-mail hollatz@il.aecom.com	Project # 6045520	Street Address																	
Phone #	Client Purchase Order #		City		State		Zip		Attention:											
Sampler(s) Name(s) A Hollatz/A Sutkowsky		Phone #	Project Manager Peter Hollatz		Attention:															
SGS Sample #		Field ID / Point of Collection		Collection				Matrix	# of bottles	Number of preserved Bottles								LAB USE ONLY		
				Date 2-14-20	Time 0000	Sampled by AX	Grab (G) Comp (C)			H2O	NaOH	HNO3	HSCi	NONE	DI Water	METH	ENCRL			X
HSIER-DUP02-021420		2-14-20	0000	AX	G	6G	3	X					X	X						
HSIER-TBL02-021220		2-12-20	-	-	-	GW	2	X												
Turn Around Time (Business Days)														Deliverable		Comments / Special Instructions				
<input checked="" type="checkbox"/> 10 Business Days <input type="checkbox"/> 5 Business Days <input type="checkbox"/> 3 Business Days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day <input type="checkbox"/> Other _____ All data available via Lablink														<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NJ Reduced (Level 3) <input type="checkbox"/> Full Tier I (Level 4) <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ DKQP		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> MA MCP Criteria _____ <input type="checkbox"/> CT RCP Criteria _____ <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format _____		<input type="checkbox"/> DOD-QSMS <i># List 13 VOC's</i>		
Approval By (SGS PM) / Date: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>														Commercial "A" = Results only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data		http://www.sgs.com/en/terms-and-conditions				
Sample Custody must be documented below each time samples change possession, including courier delivery.																				
Relinquished by: 1		Date / Time: 2-14-20 1000		Received By: 1		Relinquished By: 2		Date / Time: 2		Received By:										
Relinquished by: 3		Date / Time:		Received By: 3		Relinquished By: 4		Date / Time:		Received By: 4										
Relinquished by: 5		Date / Time:		Received By: 5		Custody Seal #		<input type="checkbox"/> Intact	Preserved where applicable		On Ice	Cooler Temp. °C								
								<input type="checkbox"/> Not intact	<input type="checkbox"/> Absent	<input type="checkbox"/>	Therm. ID:	<input type="checkbox"/>								

Appendix E

Second Quarter 2020 Progress Report

QUARTERLY PROGRESS REPORT – Second Quarter 2020 (March 2020 – May 2020)

Hamilton Sundstrand Corporation Plant 1/2 Facility
Southeast Rockford Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417, ILD010219665

This Quarterly Progress Report has been prepared on behalf of Hamilton Sundstrand Corporation (HSC) by AECOM Technical Services, Inc. (AECOM). This report summarizes activities that occurred during the months of March, April, and May of the Second Quarter of 2020 at the above-referenced facility.

Progress Report- Reporting Quarters			
Q1	December	January	February
Q2	March	April	May
Q3	June	July	August
Q4	September	October	November

This report is the thirtieth in the series of Quarterly Progress Reports and consistent with United States Environmental Protection Agency (USEPA) approval of combining project reporting documents from a letter dated April 15, 2011. Quarterly Progress Reports are included as attachments to the Groundwater Management Zone (GMZ) Monitoring and System Performances Reports.

This Quarterly Progress Report follows the requirements outlined in Section X of the Consent Decree (CD) and includes the following:

Actions taken during the prior quarter to maintain compliance with the CD include:

- Summaries of sampling results and tests.
- An identification of work plans and other deliverables completed in accordance with the CD.
- Actions scheduled for the next quarter.
- Information on the progress, percentage of completion, delays, and efforts to mitigate delays.
- Modifications to Work Plans and/or schedules.
- Activities undertaken in support of the Community Relations Plan.

Tasks completed during this period to fulfill each of these actions are summarized (by action) below.

Actions Taken During the Second Quarter to Achieve Compliance with the Consent Decree

The following actions were taken during March, April, and May of the Second Quarter of 2020:

- On March 12, 2020, AECOM submitted to the USEPA the Fourth Quarter 2019 GMZ Monitoring and System Performance Report.
- A response to USEPA comments on the Alternative Cleanup Levels Work Plan was submitted on March 13, 2020.
- Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system air sampling of the SVE system effluent prior to being de-activated (switched to the pulse-off mode). SVE process air effluent sampling was conducted on March 20, 2020.

- AECOM completed GMZ and performance well quarterly monitoring (second quarter 2020) well network sampling on May 11-15, 2020. The following wells were sampled for volatile organic compounds (VOCs): GMZ wells (which include the Phase 1 AS/SVE performance monitoring network) SMW01, SMW02, SMW04, SMW08, SMW19, SMW20, SMW21, MW07FG, MW203, GMZ01, GMZ02, GMZ03, GMZ04, PMW01 and PMW02; and performance monitoring wells RAMW01 RAMW02, RAMW03, RAMW04, RAMW05, RAMW06, RAMW07, and RAMW08.
- Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system air sampling of the SVE system effluent after being re-activated (switched to the pulse-on mode). SVE process air effluent sampling was conducted on May 21, 2020.

Summary of Sampling and Tests

- Three process air samples were collected from the Phase 1 AS/SVE system effluent during the March 20, 2020 and May 21, 2020, sampling events.
- Two process air sample was collected from the Phase 2 AS/SVE system effluent during the March 20, 2020, sampling event. Two process air samples were collected from the Phase 2 AS/SVE system effluent during the May 21, 2020, sampling event.

Work Plans and Other Deliverables Completed In Accordance With the CD

- The 2019 Annual *GMZ Monitoring and System Performance Report, Area 9/10 Remedial Action* (March 2020) was submitted in accordance with Section X, paragraph 30, of the CD and consistent with Section V of the Statement of Work (SOW).

Actions Scheduled for Next Quarter

The following actions are scheduled for the next quarter:

- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-on mode (system in operation) from May 21, 2020, to approximately July 20, 2020.
- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-off mode (system not in operation) from approximately July 20, 2020, to approximately September 21, 2020.
- Completion of the GMZ and performance well third quarter monitoring event in August 2020. The monitoring event will include the GMZ monitoring well network (which includes the Phase 1 AS/SVE performance monitoring network) and the Phase 2 AS/SVE performance monitoring network.

Percentage of Completion/Anticipated Delays

There are 39 specific deliverables or activities required to be completed as part of the CD. Some of these are ongoing activities and others, such as submittal of documents, require approval by the USEPA/Illinois Environmental Protection Agency to fulfill the requirements of the CD. To date, HSC has completed their current obligations for 28 of the 39 items, or 72 percent of the CD requirements. There are currently no anticipated delays to the schedule.

Modifications to Work Plans/Schedules Proposed

None

Activities Undertaken In Support of Community Relations Plan

No activities are required with regard to the Community Relations Plan at this time.